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ABSTRACT

Intended for use by educators responsible for developing post-secondary learning centers, this manual emphasizes the design and administration of such centers rather than the various aspects of skill instruction. Its seven chapters discuss the concept of a learning center; the components of the model, including a supplemental course, recruitment and selection of staff, the training of tutorial and teacher assistants, learning materials, distinct labs, noncredit readiness in content areas, and extension of the model; diagnosis of institutional and individual needs; instructional methodology, specifically listening, notetaking, study skills, vocabulary, and comprehension; affective considerations, with a discussion of a "relaxation" project; evaluation, including sample data and forms; and proposal preparation. (FL)

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THE LEARNING CENTER:

A COMPREHENSIVE MODEL FOR COLLEGES AND UNIVERSITIES

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FOREWORD

Plants grow lush with ample sun and rain and good earth. A natural wonder. Others fail to grow at all. Nature here is less gracious. Our wonderment about this has led to human intervention. We have come to co-produce with nature. The effect is complex: some superior hybrids, some unhappy side effects. Ecologists regularly monitor what we do so that in achieving our purpose, we do not destroy nature's balance.

People too grow lush and bright with ample nurturance, endowment and situation. This too is a natural wonder. Others fail to mature at all. Here too the Fates are less than gracious.

The authors of this monograph have tapped deep into our best research and their collective consciousness to find fitting forms of intervention. They would have us co-produce with the Fates. The outcome, no doubt, must be complex: some of the results are likely to surpass the highest previously attained; others, no doubt, to have some potentially unhappy side effects. The authors, and their fellows, will monitor these effects for good and for bad. They are lifers: committed to finding a better way. If the evidence should speak against their efforts, they will "blow the whistle" and start again. Thus, their work is not likely to be either the best or the last word on the subject; but it is a standout candidate for the best of the latest.

I am grateful that they have written as I am certain that you will be grateful that you have read.

Anthony V. Manzo
Professor, Education
University of Missouri-Kansas City

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INTRODUCTION

The purpose of this monograph is to provide the reader with the rationale and the design of a specific kind of college learning program. Underlying it is a sense of urgency. We respond to the urgency expressed throughout the nation to realize "quality education for all," and the urgency with which post-secondary institutions are trying to respond. Urgency also inheres in the struggle for survival of many private colleges, divisions of specific studies, and fledgling graduate programs which depend upon the numbers to students they can attract and maintain.

Private foundations and federal agencies whose funds support many of our programs also underline the sense of urgency. They frequently specify that proposals for support-programs must reflect the needs of diverse student populations, implying or overtly stating "a variety of ethnic, socioeconomic, and academic backgrounds." In this democratic society, the concern for "all" has become literal.

The present dilemma at the post-secondary level is analogous to the long-standing dilemma of the elementary school classroom teacher who works with students from widely varied backgrounds with widely varied levels of readiness. Professors who have developed a high degree of proficiency in expanding, opening, and honing maturing minds find themselves faced with students having awesome deficits in skills and in readiness which must be rectified before they move into the abstract levels of post-secondary education. The frustration of students with professors' expectations and

the frustration of professors with students' levels of performance intensify each other. Students begin to wonder, "How will I get through?" as frequently as professors wonder, "How will I get them through?"

Recognition of the need for a comprehensive and sophisticated program to improve student skills came as early as 1948 in a publication of the Committee on Reading of the National Society for the Study of Education. The need was reiterated and updated in the work of McDonald and Byrne (1958), of Barbe (1957), of Carter (1959), and of Burton (1962). Each of them added a dimension to the growing recognition of a need for integration of skills and content instruction. Jerome Bruner added another imperative: to rescue reading (and learning) from passivity and turn it into a more active enterprise.

The contemporary generation of theorists add the view that learning fulfills the human potential. Sherk and Manzo (1972) observe that when a person learns to apply skills to problem solving, he has enhanced the personal capability of a more effective human being and has more nearly fulfilled the human potential.

Incorporating the suggestions of these generations of theorists and researchers has resulted in a reading/learning design which operates on the basic premise that effective learning is a process that must involve both the cognitive and affective domains. Program designs must be specific enough to address instructional needs but not so narrowly defined as to ignore other aspects of an individual's growth and development. We have described the concept of the learning center, its operation, the selection and development of staff, and some of the more useful specific techniques developed to date.

We decided at the outset that this monograph would be a working manual for those persons responsible for developing post-secondary learning centers. As such, it will be "high" on content, particularly concerning the conceptualization and administration of such a center, and "low" on references regarding research of similar efforts. We leave it to the reader to gather wisdom from the standard texts which address the various aspects of skill instruction. While we have included sections on skill-related instruction, we see no point in restating what can be easily obtained from a variety of sources. We have tried to inscribe some post-scripts to the standard fare. In some cases these notions and adaptations are the product of extended experience with students. Others reflect directions in our present research efforts.

Hemingway once said, "It's plagiarism only if you steal from someone better than you are." If that's the criterion, then perhaps we have to admit to a lot of it, unconscious though it is. We have tried to acknowledge the source of our material or ideas, but there are some that we have used for so long that we begin to think of them as our own. We know we have borrowed freely from Martha Maxwell, Anthony Manzo, Walter Pauk, David Shepherd, Hal Herber and from dozens of friends, acquaintances and associates. The most we can offer to all those people is our thanks. We hope you can gain as much from us as we gained from you.

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CHAPTER I

The Learning Center:

A Concept

Currently, negative criticism appears to be the most frequent introduction to educational literature. Using this mode, the author of "new" notions introduces his concept in three stages: 1) he finds fault with the current educational trends surrounding his topic, often misinterpreting their purpose or use; 2) he offers his concept as an original insight, and 3) he describes at length the benefits and applicability of his approach over others. To present the following learning center concept in such a light would misrepresent our efforts and those of others. While we hope the reader will find many heretofore unpublished and perhaps even a few innovative ideas in this monograph, its conception mirrors the thinking of many experts and laymen. Though much of the content and methodology presented is the result of "in-house" efforts, we have drawn heavily upon our predecessors' experiences in providing educational alternatives for various types of learners.

We have developed our conception of the scope, focus and theme of a comprehensive learning center by adapting and extending many earlier notions. What we offer both in the way of philosophy and specific components has been successfully implemented within the institutions we represent. However, each institution has focused on some of the components described and not on others, depending upon the needs

of the school and the available funds. We believe, however, the overall design is sufficiently general to be relevant to institutions other than our own.

Scope: An Opportunity for Free Motion

A comprehensive center should offer assistance to all students regardless of their present stage of development. This means designing programs to serve those with remedial needs and developmental needs, as well as programs for those who are gifted. One must also bear in mind that a single student can be, and probably is, functioning on all three levels. He may be remedial in writing, developmental in reading and gifted in math. It is not the student who fits the category; rather the category may be used to describe a student's performance in a specific skill area.

A program or center designed primarily for remedial needs may indeed meet that goal. However, such a center will find it very difficult to demonstrate program success since programs are, by definition, limited to targeting remedial needs. Often results are painfully slow to materialize. This fact becomes a decided disadvantage if funding must be based upon statistics demonstrating significant gains. Furthermore, a remedial program will not attract a cross section of the student population. Unfortunately, for a remedial center the scope is limited, and it is perceived by students and instructors as a depository for the disadvantaged. It is therefore imperative that a learning center include

a broad range of services commensurate with student abilities; this may sound ideal, yet we believe it is both necessary and possible.

Focus: A Point of Convergence

Most learning centers fall into one of two basic categories: drop-in centers and out-reach centers. The most traditional type is a drop-in center which provides a place for students to come when they need assistance. By utilizing commercial packets, teacher-made materials and various types of audio-visual aids, a staff member places students in individualized programs. Center personnel supervise the students' progress; tutors may provide additional instruction; and small groups of students with similar needs may be taught. The essential idea to keep in mind is that students come for services. While these centers can be simple or elaborate, the development and ultimate impact of this design depends largely upon funds for commercial materials, and equipment and for programs that will encourage faculty involvement.

While it is wise to incorporate aspects from both categories, greater emphasis will be placed, in this monograph, upon developing the concept of an out-reach center. The out-reach center is program based; that is, programs are designed for specific populations and conducted in various locations on the campus. The majority of skill instruction takes place in groups, although individuals receive special assistance when needed. The initial monetary investment in

this kind of center is considerably less, although staff must be highly trained in various skill areas.

It has been our experience that most centers must operate on very limited budgets and yet want a high degree of faculty involvement. Faculty support and involvement is essential to the impact of either type of center. A drop-in center for students can function on a limited basis, as a self-contained entity, but an out-reach center can not. The more self-contained a center is, the less likely it is that faculty will be aware of its impact. However, if services are designed to meet the needs of specific departments, and if the center can demonstrate that student retention has been increased because of its special services, support will accrue in terms of both funds and faculty involvement.

A further distinction should be made between drop-in centers and out-reach centers. In a small college where enrollments are low and campus facilities are relatively close to one another, a drop-in center may be the most practical. Chances are that most students will pass the center daily, as will faculty members. Since departments are small, department personnel are easier to get to know and their particular needs are more easily identified. Student traffic through the center is apt to be more manageable. It is also much more likely that a significant percentage of the student population can be

involved in support programs and services. Data is more easily gathered and impact more readily felt.

On a large campus, out-reach centers are more appropriate for a number of reasons. By offering on-site services in various schools and departments, the learning center can be taken to the students, meeting them within their own physical environment. In this way, both faculty and students become aware of the support services available. The center itself, because it serves more specifically as a clearinghouse for center personnel than an instructional setting, need not be elaborate. Budget requests are sizeable in terms of personnel, but we have found that once the center can demonstrate success to one or more departments, others begin to call for similar offerings. When the staff of any center can demonstrate both results and needs, funding follows.

Theme: A Common Denominator

A learning center's theme might well be "Helping Students Through School." The ambiguity of the phrase elucidates the bivariant nature of the program. On the one hand, we serve as aides who assist the students in their efforts to find ways into and out of the maze of academe; on the other, school becomes the means by which the students are helped. In the first sense, the students are well-integrated persons who need assistance; in the latter sense, students need assistance in achieving integration. In both senses, the learning

center is an important adjunct to the students and to the institution.

Far from being an isolated academic consumer, the student is a complex of human characteristics and needs. It is often futile, if not detrimental, to attend academic needs while neglecting others. It is essential that the learning center coordinate closely with academic and other student services to avoid fragmenting the individual's growth.

Academic difficulty and emotional disruption often occur concurrently. To assume that either is the result of the other is to risk treating symptom rather than disorder. A counseling center referral may be appropriate, since many students need to work on both emotional and academic problems. Liaison between the learning and counseling centers is highly beneficial.

Coordination with the career-planning center is appropriate when it seems that a lack of purpose and lack of career orientation negatively affect student performance. We have often noted that students who lack purpose and orientation find course work irrelevant to their life needs; hence, they lack motivation.

Campus ministry offices may assist students when questioning of traditional ethics, values, and religious training results in a reduced level of academic achievement.

The campus health center may be to the post-secondary institution what the school nurse is to an elementary or high school. Nutritional problems, vision problems, contagious diseases, listlessness and generalized malaise would generally prompt referrals to the nurse in an

elementary or secondary school — and so it should be in the college or university. Older students are as subject to health-related problems as younger ones, and they need many of the same services.

Support

The learning center should be a central resource equally accessible to students and faculty. The importance of faculty involvement cannot be overemphasized: it is a major goal of the learning center to reinforce the faculty by providing assistance and support whenever requested. On a campus where the learning center serves as liaison for all student support services, it may be the "natural" resource for instructors seeking assistance in designing instructional packets, constructing better test questions, reorganizing the presentation of materials, and developing alternative instructional modes for special groups of students.

There are several legitimate reasons for a learning center to operate primarily at a student support, rather than faculty training, level. An outdated, and, in our opinion, unacceptable maxim of the 1940's was that all teachers should know and integrate principles of learning (and reading) into their instruction so that students would find subject matter more "palatable". This meant that content area experts, including persons holding master's and doctor's degrees, should seek training in the psychology of learning and apply it in their teaching. The reaction by many was outrage, as additional specializa-

tion was costly and time consuming. It was recognized, however, that teachers, especially secondary and post-secondary teachers, needed and wanted to understand more about the dynamics of learning. It was recognized that a more appropriate tack would be to provide instructors and students with a learning skills specialist as a resource. These specialists work primarily with students and secondarily with teachers when they requested assistance. Such resource relationships are developed naturally when programs are designed for specific content classes. We have found that instructors are interested in the support services. They often request that the learning specialist suggest ideas for them to try in the classroom.

Faculty involvement should not be confused with faculty development; to do so is to jeopardize the integrity of the program. Learning centers, unless a center's role specifications state otherwise, exist to develop and/or augment the skills of students, not to tell faculty members how to improve their instructional techniques. Moreover, college teachers are not only required to teach but to advise, publish, and continually advance themselves professionally. As highly sophisticated specialists, instructors must be allowed the freedom to select those areas in which they feel a need for assistance. Suggestions from learning center personnel that instructors should alter their instructional content or techniques could be viewed as academic infringement -- an anathema to faculty support.

In addition to the needed support of faculty interest and involvement, funding is essential. Many learning centers are funded by federal grants, private foundations and/or institutions. The form of a proposal which is submitted to any of these three will vary somewhat. To assist you in proposal and grant writing, we have included a brief section which will aid you in organizing your ideas regardless of the funding source. Suffice to say that there are usually either private or public funds available when two events occur simultaneously: 1) there is a need, within the institution, to provide a service which will in some way enhance student life, and 2) a successful model has been developed and experimentally tested which provides the necessary data to insure a successful program.

The Sum Total

Once these principles are incorporated into a learning center, what does it look like? The outgrowth of the principles, as we have described them, is that the learning center becomes 1) an excellent training center for persons on a professional track, 2) a research center for the development of strategies and materials relevant to issues in learning, and 3) a resource center for both students and faculty.

As a training center, the learning center will attract many students who are interested in teaching and practicum experience. Undergraduate students who are education majors and graduate students

in various content areas can be used to augment the full time staff. Training these students requires a comprehensive program, since the teaching of learning skills is an academic discipline in and of itself. A model program for training will be presented in Chapter II.

A learning center is by definition a research center which can enhance experimental efforts in many fields. Specifically, the learning center may be a resource for reading education, counseling, educational psychology, curriculum, and instructional development, educational administration and for each of the content areas for which programs are developed. The learning center is also a development center, keeping current with new materials and techniques and adapting them to fit the needs of members of the institution. Ideally, one staff person would be responsible for the collation of instructional strategies and materials and would be capable of producing journal articles and presenting conference papers on the various concepts employed in the center.

A learning center can heighten the potential of students and faculty to become more powerful both personally and professionally. As the entire institution becomes more aware of student needs, attrition rates are likely to decrease. The learning center can provide an additional source of personal involvement with students, and many students will remain in a school because of the commitment they feel. The learning center, specifically, can be an academic/affective support center that may develop into a center for curriculum advisement, research, and design through pilot projects which could become substantial

components of the institution. A learning center can also be an extension center which reaches into the community. In sum, the learning center can be a hub that attracts, develops and reinforces communication among the many disciplines and services which form the educational institution.

CHAPTER II

COMPONENTS OF THE MODEL

Supplemental Courses

Piloted in the fall of 1975, supplemental courses have been some of our most successful instructional components. These non-credit classes are attached to regular semester courses and are designed to provide students with an opportunity to bolster learning skills while they strive to achieve content mastery in the parent course. Classes usually meet from one to one and a half hours per session, two to three times per week. Schedules are set according to the group needs.

Rationale for the design is simple. Learning skills are more easily taught and students are more likely to transfer them into similar courses when the skill instruction can be tailored to a specific group studying a specific content discipline. It has been our experience that most students have neither the necessary background nor the follow-through to learn a general technique, to modify it to fit their content needs and learning style, and then to practice it until the skills are assimilated. The supplemental course model provides content support as well as supervised skill practice until the students feel confident in both areas.

Identifying a content instructor who is interested in special assistance for his class is the best way to begin. After the first year, such instructors will find you. The student population is usually

drawn from those large, introductory courses that are often difficult for students—i.e., anatomy for the Health Science students, bio-life for underclassmen.

The resource person teaching the supplemental class is required to have expertise in the subject matter. In addition, he is trained by the center staff in learning skills such as note-taking, textbook mastery, test taking, content vocabulary development, and the scheduling of time. Because cooperation between the resource person and the class instructor is essential, the resource person must meet with the approval of the instructor. Whenever possible, a person who has taken that instructor's class and made top grades should be selected.

The resource person will attend each class lecture with the students, taking notes and marking assignments and will encourage the students to write down all questions, problems and concerns they might have by the end of class and turn them over to him. The resource person will then group and analyze these questions and concerns and decide how best to meet the presented needs. He will then check with the course instructor to insure that content needs are being met in an appropriate way. The resource person might teach a class, prepare mock exams, arrange special review sessions and monitor student performance. He should integrate learning skill instruction into each session and help students to adapt the techniques and strategies whenever necessary. The resource person should collect, from the student and instructor, evaluative data on the usefulness of the supplemental

courses and prepare a summary report for dissemination.

Apart from the obvious student-related advantages of such a model, there are some not-so-obvious benefits. Perhaps the most significant accrues to the instructor. Conferences with the resource person allow feedback about the class presentation in an atmosphere of safety. As the resource person presents the major student questions/concerns for the purpose of seeking guidance, the instructor has the opportunity to evaluate the effectiveness of the last lesson. It is not uncommon for an instructor to say something like "Oh! If they are confused about this point, then obviously they haven't yet learned..." Without in-depth pretesting, instructors often assume a basic level of competence that students do not possess. Following such a discovery, the instructor frequently calls the resource person to tell him not to deal with a particular issue because he intends to cover it in the next lecture. Or he may outline a course of action for the resource person to pursue. From semester to semester, we have noted differences in course outlines, presentation techniques and exams as instructors choose to integrate ideas generated in conferences with learning center personnel.

In addition, instructors have reported that supplemental courses have allowed them more free time to prepare for class and to pursue their own writing and research agendas, since they did not have to contend with a steady stream of students seeking assistance. By working with the resource person, they could plan and, at times, present special sessions to aid many class members who needed help.

The research we have collected to date is impressive. Over 85% of the students attending supplemental classes even on a semi-regular basis have been successful in improving performance in the parent course.

Recruitment and Selection of Staff

Hiring a Director

Recruiting and training staff members is the key to any successful program. It is undoubtedly more difficult to find qualified staff for learning centers because formal training programs from which to draw skilled personnel are, for all practical purposes, nonexistent.

Institutions seeking to develop a learning center most frequently call on members of the Engligh department, Reading department, or counseling center to assist in identifying a suitable director. While each of these departments could identify personnel trained to fulfill part of the overall support function, none of these academic disciplines encompasses the full range of training experiences that would prepare a director for the task at hand.

Learning center directors need to be well versed in the areas of reading, education, writing skills, study skills, psychology, statistics, research and program design, instructional techniques and administration. That's a hard combination to find! It is, however, well worth an institutions's investment in time and salary to hire a highly trained professional. The position requires it in terms of the center's conceptualization and design. Also, in order for the director to work effectively with faculty, he should have credentials equal to those

held by other department chairpersons and staff. Unfortunately, at this time, it appears that the most likely candidates for the position are those who have worked in similar programs. There is a pressing need, in our opinion, for institutions to offer graduate courses that are specifically tailored to educate personnel for post-secondary learning center positions. Until these kinds of programs are developed, qualified professionals will be scarce. However, an institution should attempt to hire the most qualified person available, regardless of salary requirement.

If the institution is large and the center provides out-reach services, the center will have to hire other full-time staff. The director, however, should be able to train these personnel. It is our recommendation that all other full-time staff have at least a master's degree in behavioral science.

Part Time Staff

Identifying part-time staff can be greatly facilitated if the institution has two populations from which to draw: 1) graduate programs that offer internships, and 2) a federally funded work-study program for students who receive financial aid by being assigned to work in various departments.

Graduate interns who will work half-time for a stipend are a quality source of assistance. These students are already on professional tracks, and they are usually creative, energetic and often work many hours in excess of their required time. They can be placed in responsible positions which they themselves can manage with the

supervision of a full-time staff member.

Work-study staff can be trained as paraprofessionals. These students require careful screening, i.e., they should have outstanding academic records and should have professional goals. It has been found that work-study students take a great deal of pride in being granted the opportunity to participate in a professional experience. The category of "paraprofessional" may be created with the assistance of student financial aid. This office does the initial screening of work-study students and refers likely candidates to the center. Those who are chosen to work at the center enter into an intensive general training program, (which will be described later), and are granted special certificates at the end of the year, which become a part of their student record. Their work assignments are more narrowly defined than those of interns. For instance, they may become experts in notetaking, test-taking strategies, or tutoring in a specific content area. An intern, on the other hand, is expected to master all the study skill techniques and to help individuals or small groups of students with the skill development as well as the content of a specific area. Paraprofessionals require on-going training and close supervision. However, the turnover is usually minimal as many will choose to continue their work at the center as long as they qualify for financial aid assistance.

In selecting any intern or paraprofessional, one should first look for students with good communication skills, stamina and

enthusiasm. Unless the student can serve as a good role model for others, it is pointless to include him or her as a member of the staff. Academic skills can be acquired; interpersonal relationship skills are quite another matter.

It is helpful to place all interns and paraprofessionals on a contract system and help them to prepare short and long term goals which include both in-house training objectives and work assignment objectives. A member of the full-time staff meets individually with them on a weekly basis to discuss their work plans. This procedure helps to give them a sense of structure and provides a means by which their performance can be guided and evaluated.

In addition to the training of the center's staff, we have also developed a training module for interns assigned to academic departments. These student assistants are frequently assigned to teach lab sections for history, biology, etc. Most have had no education courses or teaching experience. The training module includes instruction in the diagnosis of student needs, basic study skills, and lesson preparation, as well as general teaching techniques. By strengthening the teaching skills of these interns, the center is able to assist many more students than would otherwise be possible.

Training: Tutorial and Teacher Assistants

The following outlines represent the three types of training programs which may be offered to: 1) tutors who work with students on a one-to-one basis, 2) tutors who work with students in small groups, and 3) graduate students who serve as teaching assistants in academic units. Brief narrative statements supplement the outlines of individual tutor training and teaching assistant training. The training program for tutors of small groups has not been annotated because of its similarity to the other two described.

Training of teaching assistants may be offered all departments in the institution. The same training program may be made available, on a contract basis, to other post-secondary institutions in the area, including junior colleges who hire large numbers of part-time instructors, many of whom have neither experience nor training in the techniques of teaching.

Tutor-training should be available to community groups. A local unit of VISTA wishes to train high school age students to tutor students in nearby elementary schools, and they call a learning center for assistance. A modified program may be taken to them. The Chicago based PUSH program seeks to establish a tutorial program for students in the inner city. We may assist them with a modification of our training program. Thus, the outreach aspect of the learning center moves beyond the confines of the college or university and into the community.

Individual Tutor Training Program

Each training session is two hours in length.

Session I.
- A. Initial Interview - 1 hour
  Modeled
- B. Confidentiality - 10 minutes
- C. General Information - 10 minutes
- D. Attitude) - 20 minutes
- E. Tutor's Schedule)
- F. Record Keeping) - 20 minutes
- G. Evaluation)

Session II.
- A. Diagnosis and Use of Interview - 1 hour
- B. Student Needs - 10 minutes
- C. Schedules - 20 minutes
  Short and Long Term
  Responsibilities of Students
- D. Notetaking techniques - 30 minutes
  and listening skills

Session III.
- A. Textbook Reading - 1 hour, 20 minutes
  *"SQ3R"
  Highlighting
  Informal Reading Test (demo)
  *"About . . Point"
- B. Syllabus - 20 minutes
- C. Referral Services - 10 minutes
- D. *"Informal Quiz" - 10 minutes
  Use and Value
  Types of Questions, etc.

Session IV.
- A. Test Taking - 1½ hours
  1. Preparation, scheduling
  2. Types - subjective and objective
  3. Techniques - memorization - retention
     Informal Quiz
- B. Resources - 30 minutes
  Reference library and pertinent sections of library

Session V.
- A. Setting and Writing Objectives
- B. Review of sessions I, II, III, IV
  20 minutes on specifics of each
- C. Diagnostic Use of the Exam - 40 minutes

*The techniques which are parenthesized are described in detail in Chapter IV.

Session VI.
Feedback and Follow-up

Group Tutor Training Program

Each session begins with an informal quiz on the previous sessions.

Session I.
- A. Informational Questionnaire (when and how)
- B. Confidentiality
- C. General Information
- D. Attitude, attendance, and appointments - 30 minutes
- E. "Informal Quiz"(diagnostic uses and feedback) - 15 minutes
- F. Record Keeping
- G. Evaluation - 15 minutes
- H. Personal Presentation
  - Informal Structure
  - Develop Rapport
  - Pre-established Objectives with flexibility - 60 minutes

Session II.
- A. Explanation of Informational Questionnaire (whys)
  1. Provides group profile
  2. Understanding students level - 30 minutes
- B. Student Needs - "Cone of Experience"
- C. Schedules--
  1. Short & long term
  2. Responsibilities of student (college vs. high school) - 30 minutes
- D. Note-taking techniques and listening skills
  1. "Statement PIE"
  2. "Cornell Note-taking System" - 30 minutes

Session III.
- A. Referrals - 30 minutes
- B. Textbook reading
  - "SQ3R"
  - Highlighting
  - Guided reading procedure
  - "About...Point" - 1 hour
- C. Syllabus
  1. Use as study guide
  2. Use in developing schedules - 20 minutes
- D. "Informal Quiz"
  - Use & value
  - Types of questions - 20 minutes

Session IV.
- A. Test-taking
  1. Preparation scheduling
  2. Types
     (a) Subjective
     (b) Objective
  3. Techniques
     (a) Memorization-retention
     (b) "Informal quiz"
     (c) Rules for remembering - 1.5 hours
- B. Modeling
  1. Tutor as model student
  2. Demonstration
  3. Positive reinforcement - 30 minutes

Session V.
- A. Learning Center Staff
  as resource area for students identified as possibly requiring aid in areas such as Reading/Writing skill improvement - 20 minutes
- B. Diagnostic use of Lecture Exams - 1 hour, 20 minutes
- C. Reviews of sessions I, II, III, IV. - 1 hour, 20 minutes

Session VI.
- A. End of semester - feed-back & follow-up

Teaching Assistant Training Program

Session I.

- A. General Information - 10 minutes
- B. Confidentiality - 5 minutes
- C. Pretest - 10 minutes
- D. Informational Questionnaire - 5 minutes
- E. Personal Presentation - 60 minutes
  1. Lesson Plans - 1 hour blocks, each block including:
     - (a) Introduction
     - (b) Student Activity
     - (c) Feedback
  2. Organization of the Environment
  3. Speech
  4. Stance
- F. "Informal Quiz"- 15 minutes
  1. Types of questions
  2. Method
     - (a) Oral
     - (b) Written
  3. Purpose
     - (a) Graded
     - (b) Non-graded
- G. Record Keeping & Evaluation

Session II.

- A. Informational Questionnaire - Analysis - 20 minutes
  1. Confidentiality
  2. Class Profile
- B. Student Needs - 20 minutes
  1. Dale's "Cone of Experience"
- C. Lecture/Discussion Style - 20 minutes
  1. Relevant
  2. Short & sweet
- D. Lesson Plans - 20 minutes
  1. Realistic Objectives
  2. Overall Goals
- E. Discussion Groups - 40 minutes
  1. Note-taking
     - (a) "Statement PIE"
     - (b) "Cornell Note-taking System"
  2. Schedules
     - (a) Short-term
     - (b) Long-term

Session III.

A. Referrals - 15 minutes
B. Textbook & Syllabus - 45 minutes
   1. Use as study aid
   2. Guided Reading Procedure
   3. Use in developing schedules
C. Memorization Methods - 60 minutes
   1. Retention Curves
   2. "Rules for Remembering"
   3. Word Chains

Session IV. (Held in the Library)

A. Resources - 30 minutes
   1. Library
B. Modeling - 90 minutes
   1. T.A. as "model" student
      (a) open-mind
      (b) demonstration
      (c) positive reinforcement
   2. Peer-teaching
      (a) short student presentation
      (b) student involvement
      (c) T.A. self-evaluation through student demonstrations

Session V.

A. Learning Center Services - 30 minutes
   1. Identification and referral of students who may require aid in reading/writing skill improvement
   2. Modeled interaction of T.A./student
B. Test Preparation - 60 minutes
   1. Continuity
   2. Consensus of T.A.'s determines questions, content, etc.
C. T.A.'s Plan Session VI - 30 minutes
   1. Specific needs
   2. Clarification and expansion
   3. New areas of discussion

Session VI.

A. Determined by Session V, Part C.
B. Review of Sessions I, II, III, IV, V.

Session VII.

Follow-up
Specific problems
Suggestions
Modifications
Evaluation

Individual Tutor Training

The individual tutorial session is essentially an individualization of the supplemental course instructional model, i.e., skill instruction paired with content mastery of a particular course. The student utilizing the individual tutorial is working with a content-competent tutor who models successful study and learning methods for the student. The purpose is to assure the student that the tutor will help him to formulate a successful plan and method of attack leading to mastery of subject matter and skills.

The tutor training program was conceived as a series of five weekly sessions, with tutors meeting their students between sessions; a follow-up session occurs six weeks after the final training module.

Throughout the training sessions, instructors model the techniques they hope the tutors will employ. The training instructors visit tutors during their tutorial sessions and observe their interaction with their students. Following their on-site visits, they discuss their observations with each tutor. On-site visits and written examinations following the fifth session, are used to certify a trainee as competent in the use of tutorial skills.

The tutors receiving training include learning center personnel, tutors hired by various departments and programs on campus, and all persons wishing to be on the referral list of recommended tutors which the learning center maintains.

Session I.

A. The initial interview is modeled by the instructor and one of the students in the group. See Appendix II-A for an outline of Interview Guide.

B. Tutors must understand the necessity for assuring confidentiality to their students and the possible destructive effects on the tutorial relationship if confidentiality is breached. The tutors must also know the limits of confidentiality.

C. Tutors need some information about the role specifications of the learning center, how it fits into the overall college or university program, and how the tutorial program augments the total effort.

D. Strong emphasis on the attitudes tutors hold toward their students is important. Tutors must see their students as competent persons with specific academic difficulties arising from skill deficits, concept deficits, language deficits or differences and other related problems. A positive attitude is essential if the tutor is to maintain a supportive role with his students.

E. Record keeping emphasizes the log, the self-evaluation of tutorial sessions by the tutor, and the tutor's observations relevant to the student.

F. Tutors should be instructed on how evaluations may be used to improve the quality of tutorial sessions.

Session II.

A. The interview from Session I is reviewed and used as the basis for a diagnostic recommendation. The tutors, when diagnosing the needs of their students, will use information gained in their own interviews. If they need help with the interpretation, they will have the assistance of instructors.

B. Student needs must form the basis of all tutorial sessions; Dale's "Cone of Experience" (1969) is the basic instructional supplement used in this topic.

C. Scheduling of time by the student is a frequent need, both short and long term. The responsibility of the student for the success of the tutorial session must be evident to both the tutor and student.

D. Note-taking techniques, listening skills, and the use of class notes for review and study represent the skills which we recommend that tutors consider as major clues to student's academic problems. Tutors are given the criteria by which to judge competent notes, and the techniques by which note-taking and note-using might be improved. "Statement PIE" and "Cornell Note-taking System" all have elements which the tutor should know.

Session III.

A. Textbook reading is probably the most basic problem of students requiring tutorial assistance. It is approached in several ways. Tutors are helped to understand the ways in which reading problems manifest themselves. The "SQ3R" guide is reviewed. Highlighting, underlining, marginal notations, and note-taking techniques are reviewed with respect to textbooks. The "About...Point" technique is the most generally usable for tutors. Tutors are trained to use a Content Reading Inventory with those students who seem to have reading problems. Tutors consult with instructors on the results of the test for interpretation, diagnosis and prescribed course of tutorial action if it seems warranted. (See Appendix II-B for detail and example of this reading inventory.)
B. The course syllabus as a teaching aid is examined. Tutors are reminded of the relevance of the syllabus to student planning, student reviewing and student studying.
C. Referral services on campus and in the learning center are made known to the tutors, along with the procedures for referring and the techniques for recommending students for these services.
D. The "informal quiz" is an important technique for review, and it is used to show the tutors the kinds of questioning that should occur in tutorial sessions.

Session IV.

This session is held in the university or college library and includes a 30 minute overview of reference services and pertinent sections of the library.

A. Test-taking is a common problem which tutors should be alerted to before the beginning of midterm exams. The preparation for the exam in the chief focus, with instruction in the most efficient techniques of preparation for various types of examinations. The techniques of memorization and retention of facts and data are included. The appropriateness of these techniques for the individual student may depend largely on the kind of examinations the student expects from the professor.

Session V.

A. The tutor and his student should establish their objectives for the tutorial sessions cooperatively. The tutor should know how to set objectives. Therefore, tutors are instructed in the techniques of writing behavioral objectives.
B. In this final session of the five week sequence, the key points of the first four sessions are reviewed.

C. The tutors should know how to help the student use the examination paper to evaluate the effectiveness of his techniques for both preparation and test-taking. Essay examinations provide a basis for an analysis of a student's writing. If necessary, a student can be referred to the writing laboratory program.

Session VI.

The feedback and follow-up session is intended to deal with the tutors' problems, the review of skills and formal review of logs, records and evaluations.

Teaching Assistant Training

The learning center assists the faculties of several academic departments in training their teaching assistants. With each department, the training takes a different style because the nature of the assignment varies with the department. In the biology department, for example, teaching assistants instruct laboratory sessions and conduct discussion sessions. In the history department, some teaching assistants lead discussion sessions while others function as one-to-one tutors. The training program included here is intended for assistants teaching laboratory and discussion groups.

Many teaching assistants have had no previous experience in teaching; they are graduate students whose teaching duties allow them a modicum of financial support as they pursue their graduate studies.

Session I.

A. The teaching assistants need some general information about the role specifications of the learning center, how it fits into the overall college or university program, and how the work of the teaching assistants augments the total effort.
B. The teaching assistants must understand the necessity for assuring confidentiality to their students and the possible destructive effect on the teaching relationship if confidentiality is breached. The teaching assistants must also know the limits of confidentiality.
C. In many of the entry-level courses, a pretest is used to ascertain the level of student background and skills. This test will be administered during the first week of classes, and the results are used to structure the supplemental courses. This information is shared with the teaching assistants, as it has clear implications for their work with students.

D. A general informational questionnaire, given to students during the first week of classes, will give general profiles regarding the student learning preferences, past academic experiences, and selected personal data. Computer printouts will give profiles of the entire class and of the teaching assistant's lab or discussion group. The idea of the questionnaire is introduced in the first session, with follow-up in session II.

E. Personal presentation refers to the specific techniques of meeting the class. Teaching assistants are encouraged to think of the three hour lab as three one hour modules. Each include: 1) presentation of information, 2) student activity, and 3) evaluation and feedback. Breaking the lab session up in this fashion heightens student interest in labs and makes them generally more productive than if the lab is seen as a single session. Organization of the environment simply refers to the physical arrangements which the experienced teacher takes for granted but which may be new to an inexperienced teacher. The same is true of other elements of personal presentation.

F. The informal quiz is a key technique for reinforcement of learning in the laboratory sessions. It lends itself admirably to the purposes of lab instruction.

G. Record-keeping and constant evaluation are the price of improvement and progress, and these concepts are introduced to the teaching assistants.

Section II.

A. The interpretation of the results of the informational questionnaire is studied. At the same time, the confidentiality of results is stressed.

B. Dale's "Cone of Experience" (1969) provides entree into the discussion of student needs.

C. Teaching assistants are urged to organize class presentations to allow short lectures followed by student activity and feedback. There may be several short lectures during a laboratory session rather than a single extended one.

D. Lesson planning is basic to a well conceived program. Many of the teaching assistants have never planned a lesson and need help in setting realistic objectives. Planning of lessons is included in this session.

E. Although lab instructors have limited opportunity to work with students on note-taking skills and planning of student schedules, the weekly discussion sessions which they lead does provide such opportunity.

Session III.

A. Referral services on campus and in the learning center are made known to the teaching assistants, along with the procedures for referring and the techniques for recommending students for these services.

B. Teaching assistants are introduced to the "survey" and "question" elements of "SQ3R" and are encouraged to go through those steps, with their students, with respect to the class text reading assignments. They are also encouraged to help their students to see the class syllabus as a learning aid which can enable students to preview, plan, and study.

C. Although instruction should focus on principles and concepts, much science instruction calls for rote memorization of word chains. Teaching assistants are given instruction in such techniques which will help their students.

Session IV.

A. This session is conducted in the library, and an effort is made to acquaint teaching assistants with the resources available in the general university or college library.

B. Modeling is a key concept for the teaching assistant. As a graduate student s/he is the model of a successful student, and a role model for the younger students with whom s/he works. Teaching assistants are encouraged to be aware of the styles they model and to use peer-teaching as a technique which is admirably suited to the laboratory situation. In this technique, the individual student prepares a single concept or principle to the level of mastery necessary for presentation to the class.

Session V.

A. Teaching assistants should be fully aware of the services available to them and their students through the learning center.

B. Few teaching assistants have experience in the construction of examinations. Concepts of testing and test construction are introduced.

C. The sixth and final session is planned with the reading assistants adjusting the agenda, to cover those topics which they perceive as important to them.

Learning Materials

People are certainly the most important resource to be considered in any learning center operation, but many institutions can not provide the funding required to fully staff a learning center that will be able to operate on the basis of a low student to staff ratio. Therefore, it may be necessary to consider other methods whereby students can receive needed assistance. Some means, already described, involve the utilization of peer-tutors and paraprofessionals. Another method might make use of regular faculty members assigned on a part time basis to supplement a learning center or learning lab staff. However, this may still prove to be too expensive or not feasible because of already over-extended faculty loads. Still another alternative is the development of programs which utilize programmed learning and individually paced instructional materials.

Individualized or programmed instructional materials may be used effectively in almost any kind of instructional situation, from large group, classroom learning to small group or tutorial sessions. In regular classroom courses, programmed instructional materials have been successfully used as the primary means of instruction in what is known as PSI (Personalized Self Instruction), or as a supplement to the more traditional lecture and discussion. In small group instruction such materials are used as additional individual practice to supplement the collective discussion and exercise; and in tutorials they are similarly used to advance the students' knowledge and skill prior to and after tutorial sessions.

Individualized/Programmed materials also may be useful in a distinct learning lab operation in which the individual programs of many students can be supervised by one or two professional or paraprofessional instructors. Some learning centers are primarily structured on this basis and are able to provide programs covering a wide range of skills and subject areas. In these instances, the materials are most effectively used in pre-established, complete programs or as narrowly-focused discrete units which may be either assigned separately or melded, in various configurations, into an individualized program to meet a particular student's needs. When used in this fashion there are two requirements. First, there must be a certain amount of learning center staff expertise in the instructional areas covered by the materials, in order to provide supervision and feedback for students who use the materials. Second, the staff should be familiar with the contents of all materials and their most effective use so that they can assign learning modules that will satisfy diagnosed needs.

Learning materials may be selected and purchased from the large stock of commercially available materials. They may also be developed by the learning center staff or by faculty members. Commercial materials which cover a wide range of skill and content areas, from reading comprehension, vocabulary, and writing to mathematics, psychology, and medical terminology, are available from major publishers and their representatives. A valuable tool, however, for discovering available materials is Programmed Learning and Individually Paced Instruction, a bibliography compiled and published by Carl H. Hendershot (1973), now in its fifth edition.

In addition, "in-house" development of programmed/individualized learning materials can be an effective alternative to commercial purchase. Several advantages accrue from this approach. First, the specific institutional need can be more clearly satisfied. Second, it is an effective means of gaining faculty involvement with the learning center project. Finally the materials developed to supplement courses in content areas may be tailored to the specific courses and instructors. Participating instructors are much more likely to feel an additional commitment to use materials they themselves have developed.

The process of developing materials "in-house" is not an easy task; it takes time, energy, and care, but the rewards make the investment worthwhile. The materials may, for the most part, be printed; however, if funds can be procured, nonprint audio/visual materials will provide an exciting alternative. Some requirements to be considered are as follows:

1. Programs on a single topic or subject should be sufficiently limited.
2. Individual work units or modules should require less than an hour for student completion.
3. Units should be based on clear instructional objectives.
4. Behavioral outcomes for each unit should be specified.

A brief bibliography for the development of individualized instructional materials may be found at the conclusion of this section, along with a sample of procedural guidelines.

To summarize, individually-paced materials may be used effectively in a wide variety of skill and content oriented programs including basic skill programs, offered on either a credit or non-credit basis. Such programs might include reading speed and comprehension, vocabulary development, study skill development, writing and composition, and basic mathematics.

Materials may also be developed for programs that will supplement regular course work in both introductory and advanced courses. These materials might be used as a required part of a course, as supplemental exercises for students having difficulty, or as academic enrichment for students who do not have the time to take courses in certain subject areas. These kinds of programs can be used with or without tutorial assistance; however, for students who have difficulty, tutorial assistance will prove helpful.

Although learning materials are not, nor were they ever intended to be, the sole medium for a student's learning experience, programmed learning and individually-paced instructional materials provide an alternative for students who make use of learning center programs.

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Suggested Procedure for Development of Individualized Instructional Material

1. Consult with learning center director.
2. Determine subject and perimeters within which materials are to be developed.
3. Outline major topics within perimeters, and determine overall objectives to be attained by those using materials.
4. Set tentative time schedule for completion of major units.
5. Determine specific topics for limited work/study units or modules (approximately 1 hour or less for completion by those using module).
6. Set objectives to be attained for and within each module (sequencing).
7. Determine most appropriate means of presentation (print or non-print, e.g. audio, visual or combination).
8. Update time schedule and submit to director of learning center with outline of major and specific, modular objectives (be realistic).
9. Develop materials appropriately (with exercises and tests).
10. Provide pre/post tests when appropriate.
11. Develop evaluation sheet to be used with modules.
12. Test and evaluate: Actual use with limited number of students.
13. Evaluate and revise.
14. Continuing evaluation - during or at end of subsequent terms.

Distinct Laboratory Programs--Math and Writing

Both Math and Writing labs emerge from the identification of numbers of students lacking entry-level skills for university courses. In the case of math, calculus or possibly college algebra may be the entry-level course. But math courses are not the only ones with entry-level math requirements. College physics and chemistry, for example, rely heavily on a background of algebra and trigonometry. There is a clear necessity to identify those courses which require a level of math competency as an entry-level skill.

Referrals come to a writing laboratory from a variety of departments for a variety of reasons. For obvious reasons, the writing lab most heavily involves itself with the English department. Assessment of entry-level skills is usually an English department problem. The department may administer a placement test to all incoming freshmen, or each teacher of an introductory course might administer a basic essentials test, focusing on spelling, syntax, and sentence structure. Having identified the students who are not at college level in these areas, the department does not attempt in its classes to remediate the student's problems. They are referred instead to the writing lab where a diagnostic and remediation service works with the students to bring them up to entry-level in basic skills before the end of the semester.

In addition to this specialized service, the writing lab accepts students from any campus source. The students may range from freshmen needing help with a first term paper to doctoral candidates seeking assistance with a dissertation; making faculty and students aware of the existence of the lab is a consistent problem and leads to a variety of publicity efforts. Writing lab bookmarks for freshman English texts, ads on the campus radio station, feature articles in the student newspaper and brief appearances in classes or at freshman orientation are used to alert students to the availability of the service. Faculty members who typically assign term papers are asked to allow the staff to make five-minute presentations to their classes. Frequent reminders are sent to all faculty and many of them will make specific referrals to the laboratory. Programs of assistance for faculty and professional staff in the evaluation and development of writing skills have not been generally accepted, but many individuals and institutions are aware of the specific need for this service.

The mathematics lab, like the writing lab, operates on an individual basis, beginning with an attempt to identify the level at which the student operates comfortably and then moves the student from that level to the level at which he needs to operate. The level of math competency for students in a physics class must be established in consultation with the professor. The entry-level math course establishes the level to which students who lack the essential background for that course must aspire. The level of aspiration must be tailored to each student's academic needs.

The Graduate Record Exam, Law School Admission Test, and other graduate level tests also provide basis for referrals to the math lab. In these instances, the exam itself provides the level of attainment for which the student strives.

Diagnosis of student needs in either of the laboratory situations begins with information forwarded by the instructor. Further diagnosis relies on the interview and, because the labs are content-specific, on analysis of the student's work. The objectives for the student's work are established jointly between the specialist and the student and are highly individualized.

Implicit, but unstated heretofore, is the need to work with faculty who have entry-level requirements, encouraging them to identify those students whose lack of entry skills predicts less than satisfactory performance. The mathematics laboratory can work with the physics department, the medical school, the pharmacy school, the engineering school, the chemistry department, and the business department as well as with the mathematics department. The writing lab also will cross academic disciplines. Tying either of these laboratories specifically to the mathematics department or the English department is desirable because such coordination strengthens the lab programs by giving them greater academic credibility, visibility, and faculty support.

Distinct laboratory programs are, perhaps, the most effective and efficient means of developing entry level skills for students with specific deficiencies. They not only provide tailored programs to meet specific student needs, but they also focus narrowly on the subject matter so that high levels of specialized assistance may be given.

Non-Credit Readiness in Content Areas

Areas of study in which a specific number of students progress from a preparatory course to an advanced course warrant some special attention. In the Pharmacy School, for example, students travel in lockstep through the year 1, year 2, and year 3 programs. The same kind of basic sequence of courses applies in Medical School. In these and other specialized programs, it is possible to know student schedules in advance. To assure that students have attained mastery of the basic concepts of introductory courses, the learning center staff and the advanced-course instructors have devised pre-tests, to be administered either at the conclusion of the introductory courses or during the first class session of advanced courses.

A note of explanation is appropriate. Not all the elements of introductory courses are essential prerequisites to advanced level courses. Organic chemistry professors, for example, identified only seven concepts which they felt students must remember from general chemistry. Many students, although highly successful (receiving an A or B grade) in general chemistry, were lacking mastery of one or more of these key concepts.

For the classes in which pre-tests are given at the end of the introductory course, learning center staff prepared review packets for students to peruse before beginning the advanced class. Staff members offered spaced and periodic review sessions during the interval between semesters to assist

students in mastering these concepts.

For the classes in which pre-tests are given at the beginning of the advanced class, supplemental courses are offered. In this case, key concepts are reviewed during the first few weeks of the advanced course.

Evaluation from the faculty and participating students have been highly favorable concerning these services.

Extension of the Model

Outreach Programs in Professional Schools

Since the University of Missouri at Kansas City is the largest of the institutions represented in this monograph, it has provided us with the opportunity to either pilot or implement all of the components presented. Moreover, there are some components which are unique to this university because of its health science schools and its urban setting. The following section will discuss ways in which outreach programs can be incorporated in health science schools and can become a vehicle for community service.

In 1976, the Student Learning Center at UMKC was awarded three federally funded grants. These five-year grants made it possible to establish full time learning center satellites in the Schools of Pharmacy, Dentristry and Medicine. Funding success is attributed to several factors: 1) the reading levels of each of the 1975 incoming health science classes were assessed. Test results demonstrated that even the "cream of the student crop" included an alarming percentage of students who were reading well below the 50th percentile. Considering the massive amount of technical material that students not only must read but master, it was argued that students who had not developed at least average reading skills were faced with a serious handicap; 2) In 1975, a pilot program was

established in each health science school to assist students in the area of reading, learning and study skill development. Statistical analysis of pre and post tests indicated that skill levels could be significantly raised, student attitudes towards studying could be improved, anxiety related to academic tasks could be reduced and academic performance in specifically identified content areas could be heightened; 3) Attention was focused on retaining minority and disadvantaged students since federal monies were more easily acquired for these populations. Services, however, were not limited to members in those groups; and 4) A comprehensive program was designed each year focusing on a new thrust but retaining the components developed during the previous years.

The first year was completed during June, 1977. Each milestone and objective was met; most were exceeded. Student and faculty responses to the programs have been excellent and renewed funding approved. Efforts are under way to insure that the programs will be continued at the expiration of the funding period. The program results, particularly in terms of retention and improved academic performance, has earned each learning center satellite recognition, praise and support from the host school.

It is interesting to note that while all three of the grants included essentially the same program components, each component had to be tailored to reflect the individual differences among the schools and their student populations. A point to note is that no two populations are alike. Even when it appears that needs are largely similar, programs must be designed with enough flexibility to allow for unanticipated differences. To overlook this fact

threatens viability of the program.

Outreach Program in Community Services

Many educators have estimated that it takes fifteen to twenty years for new techniques, methods and related research efforts to be reflected in public school education. As an urban university, UMKC feels a responsibility to share its insights and areas of expertise with the community it serves. As such, the learning center as well as other units on campus, have combined efforts to provide area schools, agencies and individual residents with a variety of direct services. To date, the learning center's major undertaking has been to design and implement summer programs for disadvantaged high school students. The following is a detailed account of one such summer project and a brief description of the current summer effort.

Independence Manpower Project

Many, if not most, cities have federal funds earmarked for job training and related educational programs for adolescents. During the summer of 1975, UMKC contracted with Independence Manpower to provide academic and vocational instruction to a population composed largely of white, disadvantaged high school students.

Screening and Exploration. The first phase of the program was a screening and exploration component. Eighty-three juniors and seniors participated in this module. Students were exposed to various vocations and careers through guest speakers, films, tours, small group discussions and assessments that assisted them in finding out more about themselves.

Instructional units included job seeking skills, assertive training, affective training, creative thinking and study skills. Professional resource persons guided students in these endeavors. The purpose of this portion of the program was two-fold: to expose students to vocational related experiences and to identify those graduating seniors interested in obtaining higher education.

Students met two hours a day from 4:00 p.m. to 6:00 p.m., five days a week for the two week period. During this time, students continued to receive their regular work hour wages. A staff of six was selected to carry out instruction: a program coordinator, two instructors, a counselor and two Manpower field representatives.

During screening, both the field representatives and the program coordinator contacted the participating high schools to acquire the appropriate student records, i.e., student profile information, achievements, a parent release notice and a transcript.

Screening also included a battery of tests which served to help the students learn more about themselves and assisted in the selection of students for a second component, the Summer Credit Program.

During exploration, a total of 24 speakers participated. Twelve speakers were invited on the basis of student interest in the various occupations they represented. The additional twelve were UMKC resource people including representatives from Financial Aid, Transitional Year, Academic Advising, Counseling and Testing, Admissions, Career Planning and Student Activities.

One-fourth of the two week session was devoted to study skill development. Printed materials from the learning center were used

as the written material for the reading/learning/study skill units. Small group work and individualized assistance served as additional practice for communication skills.

Selection of Students for Summer School Credit Component. There were 25 seniorsenrolled in the screening and exploration component. The remaining 58 of the total 83 students enrolled were juniors.

All seniors were given a 30-minute presentation about the summer school program. A 20-minute question and answer period followed the presentation. Students were encouraged to consult their parents about the summer school option.

On the following day, all students planning to participate were assisted by the staff in filling out admission applications. A total of 18 applications were submitted, 15 of which met the university's admission standards. Book fees and a bi-weekly stipend for the eight weeks of summer school were provided from the Independence Manpower office.

Thirteen students completed summer school. Two withdrew for personal reasons. At the close of summer school, nine students chose to continue college. Of these nine, five students had not previously considered college as an option.

Design of the Summer School Component. The students were enrolled during the regular summer semester in Biology, English and Developmental Reading (9 hours of credit). The course instructors met on a regular basis in order to coordinate their teaching efforts whenever possible.

The Developmental Reading course was designed to improve skills in five major areas: vocabulary, reading comprehension, study skills, note-taking and test taking.

Since students were enrolled in English and Biology, these content areas and their respective texts became the main vehicles for teaching reading skills. Specific techniques, such as the Cornell Note-taking System (Pauk, 1974) and Robinson's SQ3R (1961), provided a framework for assisting students with study skill development.

Notes taken in other subject area classes were periodically checked by the Developmental Reading instructor as to format, conciseness and accuracy of translation. The emphasis here was to help students develop a study guide tailored not only to course content but to their individual learning styles.

The Nelson Denny Reading Test, Forms C and D, was administered as pre and post tests. The purpose was to measure levels of significant improvement in areas of reading vocabulary, comprehension and rate. The data revealed that students made sizeable gains in all three areas over the eight week period. In vocabulary, the pre-test mean placed the group at the 29th percentile; the post-test indicated a gain of 11.2 percentile points. In comprehension, the pre-test mean placed the group at the 31st percentile. The post-test was nine percentile points higher. A gain of 33 percentile points was revealed when reading rate was tested with a pre-test mean at the 22nd percentile and post-test mean at the 56th percentile.

The Nelson Denny Reading Test, a popular standardized instrument, is not designed to show minimal gains. In fact, it is unusual for a group of students to show that much improvement in such a short period of time. This is a tribute to the combined efforts of the

summer school instructors and the motivation of students to suceed.

When final grades were determined, the overall GPA of the group ranged from 4.0 to 1.3 on a 4-point system with a mean of 2.6.

Educational and Recreational Activities. The summer school students participated in four recreational events: a day at Worlds of Fun, a visit to Silver Dollar City, an evening at Starlight Theatre, and a trip to see the Kansas City Royals play the Boston Red Sox. Students also visited the Independence Courthouse to hear cases argued.

In summary, the staff avoided conceptualizing a program for disadvantaged youth based on the notion that what they needed were "survival" skills. Many such programs reflect an attitude of lowered expectations as if the participants were, by definition, limited in what goals they could attain. The staff presented many units that were quite sophisticated in content, often engaging students in materials used in graduate studies. It was found that both the screening and exploration population and those who elected to join the Summer Credit Program participated in these units enthusiastically. This model may prove beneficial to others who feel that traditional methods are often inadequate for the disadvantaged.

Inner-City Summer Program

The present program (1977) began in May with the recruitment and employment of teacher-administrators to supervise the program. With those persons, the learning center staff recruited and trained a

total of 12 teachers and teacher-aides. The purpose of the project was to provide an educational opportunity for disadvantaged inner-city youth. The students in the program, almost all of whom were black, were paid an hourly wage equal to the wage other students received for working on various city clean-up and beaufification projects.

As it emerged, the program involved the following components:

Math — a partially traditional, partially experimental program. The experimental element involved the introduction of hands-on physical science experiences with levers, pulleys, gears, pendulums, with the math instruction emerging from the student activity with simple machines. The emphasis throughout was on prediction, followed by verification, correction and discussion.

Reading — a partially traditional, partially experimental program. The experimental program involved a high degree of oral participation. ReQuest, Guided Reading procedure, Communal Poetry, and Latent Image Vocabulary were the techniques used to encourage the development of communication skills.

Study Skills — the traditional skills were presented from a content base, using a psychology text as the content material.

Environmental Awareness -- a neighborhood-based ecology study included field trips in the immediate neighborhood and throughout the city. Trips ranged from ecology walks through vacant lots to visits to superior courts.

Values Clarification -- development of self concepts was pursued through a variety of techniques derived from recent professional literature.

Special Interest Groups -- these ranged from gospel singing to African art and drama.

Creative Experiences -- art, music, yoga, meditation and dance proved to be one of the most popular and effective components.

Initial evaluation indicates that this group of 90+ maintained higher attendance rates than students in the work programs, although the penalty for absenteeism (loss of pay) was the same for all.

Learning center personnel, on a time-available basis, worked in the program directly with the students, taking the experimental teaching techniques from the university into the classrooms.

References

Dale, E., Audio-visual Methods in Teaching. Third Edition. New York: Holt, Rinehart & Winston, 1969, 107.

Appendix II-A

Interview Guide

The purpose of the interview is to gain information in specific areas of the student's development. The format of the interview may vary, but we suggest that the interviewer explore the following questions.

1. Does the student have an accurate perception of his problem?

   There is often a tremendous difference between what the student perceives as his problem and what the problem really is. The interviewer must gain information concerning both. For example, the student may assume he has a reading problem when in reality, the textbook is unusually difficult. He may be performing poorly on exams because the examiner does not seem to be testing what was stressed in class. On the other hand, the student may say the professor is poorly organized when in fact the student's note-taking skills are deficient. The important point is to pursue the student's self-diagnosis with further investigation.

2. What is the student's background in related coursework?

   As in the medical model, history is essential to accurate diagnosis. History may reveal a pattern of competence or one of constant difficulty. In either case, the interviewer should record historical data.

3. Does the student's time schedule show any need for re-arrangement?

   Examination of the schedule will allow the interviewer to make some important observations about the study arrangements of the student, such as non-academic demands on his time, and amount of time spent on each subject. It will be necessary to know also whether he studies at length on one subject, believes in cramming, and understands when the most effective study can be achieved.

4. What is the living situation of the student?

   It will be helpful to know if he shares an apartment, lives at home or in a noisy dormitory. The tutor must know whether a quiet place to study is available.

5. What are the student's present goals?

   It may be that the student perceives little relevance between troublesome course and academic or life goals. A wide divergence in this area can indicate a serious problem.

6. What is the student's level of functioning in other classes?

   A pattern may be seen in several courses or in a particular type of course, such as those with a lot of reading involved.

7. What is the current emotional state of the student?

   The information needed here is whether an emotional disruption may be interfering with learning.

8. What is the nature of the current physical condition of the student?

   The student should understand the relation between adequate exercise and sleep and school performance. If a state of constant anxiety exists regarding school work, performance will be diminished.

9. Does the student have any problems in the area of nutrition or allergies? Is he taking any medication?

   Students may be having difficulty in the middle of the ragweed season and not attribute intellectual lethargy to the debilitating effects of either allergy or the antihistamines which counter the effects of allergies. Information is available on the relevance of nutrition to student performance. Side effects of regular medication is something about which the tutor ought to be informed.

10. What is the student's ability?

    It is important to know whether the problem is in the student's preparation for an examination or in the examination situtation itself. Examine a recent test with the student. Which questions did the student answer incorrectly despite knowing the answers? If there is a large number of these, the problem may be in the test-taking situation; if not, it may be in the nature of the student's preparation.

11. Does the student take good notes?

    If notes are sparse, or if they are comprised of details but lacking in concepts (or the reverse), it is clear that some work in this area will be required.

12. Does the student know how to handle his textbook and other reading in an organized, efficient manner?

    The student must learn both generalizations and specific details. He must designate a purpose for his reading, also. The tutor must be able to ascertain what kind of problem the student is having and to give the student a method of attack.

13. Is there a lack of understanding of the course content?

    The need to participate in supplemental sessions, in addition to embarking on either a tutorial or corrective skills program, may be suggested.

14. How does the student rank his immediate priorities?

    Five areas will be placing demands on the student: course work, financial concerns, personal well-being, social life and family. It is important to know how the student ranks these areas in importance to him.

Appendix II-B

Informal Content-Reading Inventory

1. Select a 5-10 page section of a current text (approximately 4000 words).

2. Read the section closely, extracting the points analogous to those on the accompanying sheet (taken from a class text for American History II).

3. List words that may not be in a student's vocabulary with the context in which they appear.

4. Assign the student to read the selection, with a 20-minute time limit. Tell the student you will ask him/her to tell you what was read.

5. After the 20 minutes (or after the student finishes), ask the student to tell you what s/he read. On "recall" sheet, indicate the items and ideas that the student recalls. The purpose is to find how much the student can remember in an unaided recall situation.

6. Ask questions which give no information. Anything the student said may be repeated. "You mentioned _____. Can you tell me more about that?" This is still a part of unaided recall.

7. Using a different sort of marking device, ask about things not mentioned. "The book referred to _____. Can you tell me about that?" or "What was the main idea here?"

8. Score unaided recall as a percent of information on the sheet; score aided recall the same way.

9. Ask the student to read an additional selection (approximately 300 words) aloud. Using a sheet with the selection typed verbatim (including length of line), mark miscues, repeats, long pauses, corrections. An example entitled "The Harassing Question of Poland" is included.

10. Ask the student if s/he can define any word on the wordlist that s/he has not used in the recall sections. Use the word in context as it was in the selection. Circle any word the student can not adequately define.

11. Compute approximate rate of student's silent reading and approximate rate of oral reading.

12. Record inferences and references to previous knowledge as indicated on "recall" sheet, noting whether they occurred during "unaided" or "aided" recall.

13. See attached "Recall Scoring Sheet" which has been marked for student responses as a model of the format and as a sample for scoring.

    indicates something the student recalled, unaided.
    indicates something the student recalled with assistance.

    In computing scores, the number above the line indicates the estimate of the amount of information in each category the student provided without assistance; the number below the line indicates the amount the student provided with assistance. Typed numbers represent the points assigned to each section.

    In the upper right corner, see the totals for scoring, with a "recall" total of 65%, 28% unaided, 37% aided.

14. Scoring.
    If a student scores approximately 40% or better on unaided recall and 60% or better on aided recall, then it is not likely s/he will have difficulty in textbook reading. If the student aspires to top level of performance, however, this criteria should be raised.

Total unaided	28
Total aided	37
Total recall	65%

RECALL SCORING SHEET

Recall

Major Figures: - 5 points

✓ Roosevelt
✓ Truman

5/0

Details: - 10 points

✓ Dead, ex-President
✓ New President, former Vice-President
✓ Wanted to seem decisive and confident, but was not confident as President
~ Continued Roosevelt's policies, had none of his own
~ Very candid and open
~ Had sign on his desk, "The Buck Stops Here"

5/5

Minor Figures: - 10 points

Oppenhimer
Bust
Groves
Stimson
Vaughan
~ Jackson
Early
Barkley
Sachs
✓ Churchill
✓ Manhattan Project

2/1

Details: - 10 points

✓ Scientist who knew about work on bomb
Government official who know about the bomb project. Member of M.P. top Policy Group
Military Adviser to Roosevelt
Cabinet Member who knew about Atomic Bomb Project
Truman's friend and assistant
~ Earlier President who acted aggressively in nullification crisis
~ Truman's Press Secretary
Someone who knew Truman well
✓ Questioned whether atomic bomb should be used
✓ British leader with whom Roosevelt made secret agreements
~ Code name for the bomb-building project

3/3

Minor Points

✓ As Vice-President, Truman knew very little of Roosevelt's policies, either foreign or domestic.

Roosevelt had far greater power and influence than Truman had - both with Congress and with the nation.

Roosevelt had not made an absolute commitment to use the bomb.

✓ Scientists working on the bomb project raced to finish before the war ended.

~ Roosevelt had made agreements with Churchill regarding atomic energy and the use of the bomb, but even his closest advisors didn't know the details of the agreements.

~ Roosevelt had no advisors who were considering the impact the bomb would have on postwar diplomacy.

~ Roosevelt's popularity would have made it difficult for Truman to change any of his policies.

Truman had no background in foreign affairs, and some of the things he said proved it.

Truman had the idea from reading and experience that the course of history was guided by strong men, acting on principle.

When Truman entered the room for Roosevelt's funeral, no one stood. Everyone stood when Mrs. Roosevelt entered.

✓Truman was overwhelmed by the responsibilities of his new office - as if moon and stars had fallen on him.

One of Truman's first decisions - to go ahead with the plans for the United Nations Convention in San Francisco.

Stimson told Truman about the bomb, but very little.

As a Senator, Truman had nearly discovered the secret bomb project, but had not actually discovered it.

Stimson, preparing to discuss the bomb project with Truman, called for a study of the whole atomic energy situation.

Inferences (Give Example) 10 points

Aided: 5/0

Unaided: Truman was a very powerful President.
Truman knew how to be President and represented the common man

Reference to Previous Knowledge 10 points

Aided: Some experts think they didn't have to drop the bomb. Others thought it was necessary. 8/0

Unaided: Bomb was dropped in Japan. The bombing ended the war.

Main Idea 20 points

Roosevelt's secrecy about his plans and Truman's lack of confidence in his abilities combined to create a difficult situation after his death: Truman tried to carry out Roosevelt's policies without knowing what those policies were, particularly in the areas of foreign affairs and atomic bomb development. 0/20

* * * *

Vocabulary

Anglo-American	Roosevelt's commitment to continue the Anglo-American atomic energy after the war died with him.
exclusive	They opposed the idea of an exclusive partnership.
coherent	The need to formulate a coherent postwar policy was pressing.

irreversible	He could hardly have considered it an irreversible declaration of intention.
warranted	The matter warranted very careful discussion.
sphere	Policy in the sphere of atomic energy was definitely settled.
legacy entail	Truman's atomic energy legacy did not entail complete freedom to choose between conflicting policies.
constrained	The new President was constrained in his choices by Roosevelt's sudden and unexpected death.
precipitated	Roosevelt's death necessarily precipitated a major review of foreign policy.
rhetoric	A notorious example of his careless rhetoric was a remark he made when Germany attacked the Soviet Union.
elicited	New circumstances elicited new opinions.
decisive	He relied on the advisers who offered decisive advice.
chaotic	Truman's first days in office were chaotic and agonizing.
profoundly	Stimson was profoundly anxious about the turn of events.
enigmatic	His enigmatic remarks to Truman had been impulsive and very much out of character.

NOTE: This inventory is based on a selection from A World Destroyed by Martin J. Sherwin, Random House, 1977.

THE HARASSING QUESTION OF POLAND

0001 During the daily meetings and briefings that filled Truman's
0002 first ten days as President, most of his time was devoted to for-
0003 eign affairs in general and the "harassing question of Poland"
0004 in particular. The impression he received from his advisers,
0005 from Churchill's messages, and from State Department reports
0006 was that Stalin was not keeping his word. The new President's
0007 first official visitor on April 13 was Secretary of State Edward
0008 R. Stettinius, Jr., an official with little influence under Roose-
0009 velt, but a man who represented the rising tide of mistrust of
0010 the Soviet Union then flowing through high government cir-
0011 cles. His report to the President on the "background and the
0012 present status of the principal problems confronting this gov-
0013 ernment in its relations with other countries" viewed American-
0014 Soviet affairs almost exclusively with reference to events since
0015 the Yalta Conference. Stettinius declared that "Churchill fully
0016 shares this government's interpretation of the Yalta Agreements
0017 on Eastern Europe and liberated areas." He reported, however,
0018 that the Soviet government had taken a firm and uncompro-
0019 mising position on nearly every major question that has arisen

in our relations," and he enumerated just what those issues were. "The most important of these are the Polish question, the application of the Crimea (Yalta) Agreement on liberated areas, the agreement on the exchange of liberated prisoners of war and civilians, and the San Francisco Conference (United Nations Organization meeting) . . . . in the politico-military field, similar difficulties have been encountered in collaboration with the Soviet authorities." With regard to Poland, Stettinius stated that "the Soviet authorities (are) consistently sabotaging Ambassador Harriman's efforts in the Moscow Commission to hasten the implementation of the decisions at the Crimea Conference."

CHAPTER III

DIAGNOSIS

Diagnosis of Institutional Needs

It should be observed that many individuals on campus can be helped in determining student needs. Deans, department chairpersons and supporting faculty should always be consulted when diagnosis concerns their academic division. Together, the learning center staff and department personnel can diagnose underlying problems and develop programs to counteract the emerging trends.

Secondly, the learning center staff should use information that is generally available in computer storage or from the registrar's office to identify problems in both entry-level and advanced courses. Significant statistics can be presented to the appropriate administrative officer and intervention programs developed as needed.

Thirdly, the learning center staff should identify student population groups who have specific problems and needs, working with people who have contact with those groups. The center staff can aid in developing programs to meet the specific needs and to solve specific problems.

A lack of certain key data hampers full diagnosis of institutional problems. In-depth interviews with students who leave college before they have completed their degrees may provide many insights. Alternatively, a response form which students fill out at their leisure and return to the institution by mail could provide much additional information. Without such interviews or feedback, the institution has no way of knowing the students' reason for leaving. Are they responding to economic pressure,

academic failure, frustration, more attractive programs elsewhere, health problems, interpersonal problems or family needs? It is essential to make an effort to follow up on students who fail to return for a new semester and to ascertain the causes.

A survey of grades in entry-level courses may also reveal important trends. Admission standards are intended to assure that only competent students enter a college or university. If large numbers of these selected students fail entry-level courses, it may be assumed, with some justification, that lack of intellectual prowess is not the cause of failure. Rather, we might suspect that there is a skill deficiency, an absence of specific entry-level knowledge, or a deceptive high school transcript. Examples of situations in which these factors operate are as follows:

A. A Deceptive High School Transcript.

> K.T. earned nearly a 4.0 grade average in an inner-city high school. Subsequent inquiry revealed a level of teacher expectation, for students, which was so low that any student willing to sit down, shut up, and seem cooperative was rewarded with a high grade. Teachers, understandably but not justifiably, used the reinforcement of grades to mold student behavior. K.T., blissfully ignorant of the meanings of grades in other schools, moved into the university, confident of her ability to succeed. After her first devastating semester, K.T. required two full years of work to overcome the deficiencies and attitudes that were the products of her high school experience. She learned, first, that the skills which had earned top grades in high school were of little value to the university faculty. Sitting down, shutting up, and seeming cooperative were acceptable, but the required level of subject mastery came as a shock. Fortunately, she had the ability to overcome her deficits in both skills and content.

B. Absence of Specific Entry Level Knowledge.

A high rate of failure (F grades, D grades, and Withdrawals) prompted inquiry into the Terminal Organic Chemistry course. Inquiry into the backgrounds of students entering the course revealed that their general chemistry experiences were widely varied. Some had university general chemistry; some had junior college general chemistry; some had taken general chemistry as many as five years earlier; some had been highly successful in general chemistry, and some had not.

Furthermore, not all students who received high grades in general chemistry had necessarily mastered those elements of the course which the teachers of T.O.C. had assumed students knew. It is possible, for instance, to receive a "B" grade in general chemistry without mastering Oxidation-Reduction reactions.

To identify necessary entry-level skills, specialists met with T.O.C. professors who selected seven concepts they felt were essential for entering students to know. Specialists prepared a pre-test for administeration to all entering T.O.C. students. Students showing specific deficits in the pre-test were scheduled into supplemental classes where they worked to master entry-level concepts as they proceeded through the T.O.C. material.

C. Skill Deficits.

First exams in U. S. History, Biology I, and other entry-level courses yielded the names of students in trouble. Follow-up small group interviews with these students revealed that problems fell into clear categories; problems with textbook reading, note taking, content area knowledge, vocabulary, scheduling of study time, test-taking. Supplemental classes were designed to alleviate skill deficits while supporting the student in content material.

Thus, it is evident that institutional diagnosis must take several forms. Computerized record keeping allows easy access to grades in entry-level courses and computer programs can be used to pinpoint those areas in which large numbers of students are unsuccessful. Following such identification, meetings

with department chairpersons elicit permission to meet with and work with professors of the classes in question. Finally, analysis of specific problems in specific classes leads to a plan of action for the learning specialist.

A second important diagnostic survey may be conducted by department chairpersons. The School of Administration, for example, received feedback from both graduates and the employers of graduates. The director of the School then knows that skill in writing is a need seen by both graduates and employers. Having diagnosed the problem, the chairperson needs the assistance of the learning center staff to implement a skill development program.

The faculty of the mathematics department is aware of the inordinate number of students failing or withdrawing from the introductory level mathematics course. The faculty has neither the time nor the desire to teach a pre-introductory level course. Having identified the problem, they need the assistance of the learning center staff in developing a corrective program.

Fraternities and sororities must meet minimum grade standards in order to remain viable campus organizations, and they frequently find themselves on the thin edge of eligibility. The officers can identify a symptom - the poor grades of the members. They need the learning specialists to help them diagnose the problem and to remediate it.

Deans of graduate schools are aware that some excellent students are failing to achieve requisite scores on Graduate Record Exams and are being denied admission to graduate divisions. They need the help

of the learning specialists in setting up programs of review and remediation that will enable competent graduate students to meet minimum GRE requirements.

The director of Women's Services knows that re-entry women have academic problems. She may not know specifically what they are, but she knows that anxiety plays a large part. She needs the help of learning specialists to identify the problems and provide solutions that will help to reduce the anxiety.

The diagnosis of the needs of the campus is a multi-faceted program requiring constant attention. Such diagnosis may be made through identification of groups with specific needs, identification of symptomatic trends, and use of computerized grade information for entry-level and advanced courses. Only through diagnosis, however, will the learning center become a viable force for improvement of instruction and student retention.

Diagnosis of Individual Student Needs

Having identified broad student groups as having need of academic support services, we now come to the problem of diagnosing the specific needs of individual students. Although standardized tests may by helpful, the key to diagnosis is the initial interview. In the interview it is necessary to seek information concerning 1) the students' perception of their problem, 2) their living situation and study habits, 3) their goals and current levels of achievement, 4) their physical and emotional state, and 5) their academic skill levels. This information will provide a composite picture of possible problem/need areas.

The student's own perception of the problem is important in gleaning a thorough understanding of both the problem, the student's attitude toward it, and ultimately, the solution for it. The student's own statement of the problem, will provide insight into both the problem and the motivation for seeking a solution. The student may attribute incoherence to an instructor when in fact it is note-taking skills that are inadequate; the student may assume a reading problem when in fact the text is barely readable; the student may infer poor mastery when exams test irrelevant detail. Or the student may accurately identify the problem. The important point is to pursue the student's diagnosis with further questions which will provide additional insight.

The student's living situation and general study habits may also illuminate the academic problems. The specialist needs to know if the student

shares an apartment with several other students and has no place for regular, uninterrupted study, or lives at home and with a family that makes allowances for needed study time, or lives in a noisy wing of an active dorm. These are important pieces of information. Likewise, examination of the student's schedule will allow a specialist to make observations about the student's study arrangements: whether the student studies shortly after lectures and class activities; whether the student's study time is concentrated or dispersed through the week; or whether the student relies on cramming without intervening study. Also, the student's background in related courses may reveal an important pattern of competence or a pattern of avoidance.

If a lack of motivation is suspected, it may be that the student perceives little relevance between a troubling course and academic or life goals. On the other hand, if the student has not formulated career or academic goals, or if there is a disparity between life goals and present course of study, referral to counseling or career centers is advisable. Furthermore, level of academic performance in other courses and experiential background may compound the motivation problem; or, in a similar vein, the present difficulty may be reflective of an established pattern.

The emotional state and physical condition of the student is also important in diagnosis of academic problems. These considerations may not seem significant to the student, but it may be crucial information regarding his academic performance. Frequently, students with academic difficulties will sacrifice or ignore physical health because of concern about course

problems. Nutrition and allergies are other important areas of inquiry. Students may be having difficulty during the hay fever season and not attribute their intellectual lethargy to the debilitating effects of either the allergy or the antihistamines. Recently there has been an increasing amount of information concerning the relevance on nutrition to student performance. Problems in either the emotional or physical area should be recognized immediately, and appropriate referrals made.

Finally, a student's academic skills and level of understanding in the particular course are of importance to the diagnosing specialist. A study skills survey or inventory may be the best way to determine the former. But test-taking, note-taking and textbook reading should also be areas of inquiry in the interviews. Look at a recent exam with the student. Inquire about questions answered incorrectly. If the student missed a significant number of questions for which he knew the answer, the problem may be related to the student's ability to read and understand the question or to test anxiety. If the student does not know the material, note-taking or textbook reading may be the key. If textbook reading appears to be a problem, have the student read an unfamiliar section for the purpose of recalling information. The student should then be asked to provide unaided recall of information, answers to specific questions about the material, and answers concerning the purpose of the section. This will help to ascertain the student's approach to the text and the kinds of information remembered and omitted. Diagnosis may indicate a need for a corrective skills program or participation in supplemental sessions may be appropriate.

A careful interview will also provide much information. Standardized or informal tests may also help to pinpoint specific problem areas. In any case, diagnosis of student problems and needs is the initial stage in fulfilling the learning center's function.

CHECKLIST FOR DIAGNOSIS OF STUDENT NEEDS

1. Student's perception of the problem.
2. Student's living situation.
3. Student's study schedule.
4. Student's other study habits.
5. Student's academic and career goals.
6. Student's general background and level of academic achievement.
7. Student's emotional state.
8. Student's physical condition.
9. Student's academic skill level.
10. Student's level of understanding of course content.

CHAPTER IV

INSTRUCTIONAL METHODS

There are few instructional methods or techniques that cannot in some way be adapted to assist college students. Even some methods for teaching beginning reading, such as language experience and Distar, may be appropriate. We have selected some of the techniques that we found especially helpful and, at times, entertaining.

Often instructors ask, "What is the best method to accomplish this objective?: Before answering, several additional variables warrant consideration: needs of students, organization of content material, the teacher's style of presentation, and students' learning styles. Research designed to answer such questions is inconclusive. In working with students, we have found that most seem to learn best when they are exposed to a variety of methods, using several instructional devices. A completely effective network of skills for different types of learners has not been established, but one investigation into post-secondary learning styles is currently in process at the University of Missouri - Kansas City. The results of this effort are expected to yield insights into predicting instructional methods which will be compatible with the various learning styles.

A wealth of literature exists which fully explains some of the skills and methods presented here. Where appropriate, we have cited the references which have aided the development of our programs. The skills to be discussed in the following pages are listening, note-taking, study skills, vocabulary, and comprehension. Methods and techniques will be discussed under the appropriate skills.

Listening

Implicit in the ability to take good notes is the skill of listening. The way that students attend to lectures - their posture, ability to ask clarifying questions, concentration, reception of information and ability to re-state information in written form requires development of "pre-note-taking" skills.

Often we advise students to engage in some specific readiness activities before attending a lecture or seminar, such as 1) preparing themselves mentally to concentrate for however long the class is scheduled to meet, 2) reading the assigned material prior to class to determine what they do not understand, 3) giving special attention to any introductory outline of discussion topics that the instructor may offer, 4) making special notations when the instructor emphasizes key notions as these are the areas in which students will likely be tested, and 5) determining the proper use of notes.

One additional consideration which will aid students in developing their listening ability is related to their own listening style. Some students are compulsive listeners who attempt to write down everything they hear; others are impulsive and select certain points which are stressed or they feel are interesting. Students need to develop the ability to listen to and record major points and at the same time be able to identify specific areas that they wish to investigate further. In other words, they need to strike a medium between compulsive and impulsive styles. Before they can do this, however, they have to determine the strength and weakness of their own

note-taking style.

A specific technique designed to increase listening potential is TQLR, developed by Don H. Parker:

TUNE-IN - Mobilize your mental processes and give the speaker your full attention. Begin to relate the topic to your own experiences.

QUESTION - Anticipate what you are going to learn. For example, you might ask such questions as "What is the purpose of this lecture? How am I supposed to use this information? How does it relate to what I already know?"

LISTEN - Listen in order to answer your questions. Try to anticipate what is coming next. Draw conclusions and check them against what the instructor actually says. In this way, you are actively thinking and learning; you are, in a way, listening as opposed to merely hearing.

REVIEW - Periodically review the things that have been said. Summarize, evaluate and compare. Look for weak areas in your understanding and ask for clarifications, so that you are sure that you have understood what was said.

We have added an additional step, called I.Q., inquiry questioning. Once the TQLR procedure has been integrated, an individual is ready to demonstrate his/her IQ ability. This consists of asking questions which require explanations and judgment at the why, how and if levels. "Why should I believe this?" "How does this view compare with another?" "What would happen if we followed this point to an additional conclusion?" or "If this is true, what about this other related situation?"

Inquiry questioning is also a kind of listening. It is listening to the ideas, associations and questions which the mind has conjured in response to having listened well to what was first said. This notion is part of a whole array of procedures soon to be published in book length

entitled "Reading and Languaging in the Content Area" by Anthony Manzo and John Sherk.

Note-taking

Notes which are clear, concise and well organized are a valuable resource not only for facilitating learning but also for retaining information over a period of years. In many adult conversations one might hear the following: "I remember a discussion about this in one of my college courses. I'm going to have to get out my old notes and review them." We sometimes wonder if older returning students do review the notes they have retained since many visit the learning center for note-taking assistance.

One of the most efficient systems for taking note is the Cornell Note-taking System developed by Walter Pauk. Also known as the "5R" system, it has provided a useful model for recording and integrating information.

Cornell Note-taking System

RECORD	-	meaningful facts/ideas
REDUCE	-	summarize, clarify, reinforce
RECITE	-	cover the notes, recall aloud and verify
REFLECT	-	think about the meaningful categories
REVIEW	-	regular review enhances retention

From time to time, we have developed for students, alternative note-taking systems which incorporate essentially the same steps. Fred Duffelmeyer, now at Drake University, developed a system which he called WRECK.

WONDER - approach a note-taking situation from a position of curiosity, the desire to know what it is you do not know.

RECORD - write down as much of what lecturer says as possible, excluding only repetitious statements and digressions.

EDIT - as soon after the lecture as possible, condense notes in a separate notebook, editing out nonessential material. Organize the remaining material into a quasi-outline form.

CORRELATE - compare your condensed notes with related material in the textbook and with notes of others. Supplement condensed notes with textbook material as needed.

KEEP - review notes periodically to insure retention.

Duffelmeyer further states three advantages in using the WRECK system: 1) it has a built in, immediate review feature (edit) which helps to solidify the retention of new information; 2) it offers a step for integrating one source of information, the lecture, with another source, the textbook, leading to a broader base of new information; and 3) it facilitates periodic review of condensed notes from which nonessential information has already been eliminated.

We encourage students to experiment with several systems and design their own if they choose. At regular intervals, it is advisable to review their notes with them to insure that they are not overlooking steps that might prove helpful. For some students, we recommend that they use paper which has a 2½ inch left-hand margin, with a horizontal line separating the upper 2/3 of the paper from the lower 1/3. They may draw these additional lines in spiral notebooks. The 2½ inch left hand margin provides space for

reducing notes to key words and phrases and the lower 1/3 is reserved for summary and questions.

Study Skills

The definition of study skills and the actual teaching of them is somewhat of a paradox: study skills are any techniques or methods that students use to learn something more effectively and independently. However, we have found that study skills cannot effectively be taught singularly or in an isolated context.

We offer a number of suggestions regarding the teaching of study skills. First, we've found that a separate workshop wherein the "SQ3R" method (Robinson, 1961) is presented as a concept is not very effective in helping students internalize the procedure. Many students feel an annoying kind of pressure or cognitive dissonance when asked to learn, remember and apply a concept, even though it is designed to help them become more successful. For example, if they complained about "too much assigned reading" and we ask: "Aren't you using SQ3R?", they might blankly respond, "Which procedure was that?" What we suggest with the teaching of "SQ3R", and all other study skills, is that emphasis be placed on student practice of surveying, questioning, reading, reciting and reviewing. Understanding the concept is not sufficient.

As we mentioned in the description of supplemental courses, skill instruction should be integrated with the specific content material so that the courses in which students are enrolled become the vehicle for skill instruction. The reading/study assignment should be brief enough to be completed within the instructional session. It is important to use these

sessions to reinforce a method of learning. This can be done by tailoring the session to include discussion of notes, textbook reading, questioning and review, or any other combination of study skill activities. Any skill development requires repeated practice; using the material that students are required to master reinforces integration of course-work and develops learning skills that may be more easily transferred.

What we report here are our adaptations and uses of some specific study skills. We recommend the additional references cited at the end of the chapter for those who are not familiar with the original techniques.

Readiness for "SQ3R" - Survey-Idea Statement

Looking at students after they have purchased their textbooks, one might notice the gloomy expression on many faces. They may be wondering: "Am I wasting my money (or my parents' money) by buying all this stuff?" In addition, they are likely questioning their own ability to learn all that material. We know that a large percentage of them are going to have difficulty.

"SQ3R" can be used to give students an opportunity to become immediately familiar with their textbooks. It also helps them maximize their study effort. The readiness procedure described herein is designed to give students practice in surveying an "interesting" book and then reacting to and formulating a brief survey/idea statement. Students discover that by simply looking at each page, they can formulate an impression of the contents. A discussion can be generated from their initial reactions. This procedure works best with four or five students; appropriate material would be a short

paperback, the same one for all students.

Announce: Today we are going to discuss an idea or thought that you have after you have looked at each page in this book. (state the title and the author's name) It might be helpful for you to write down any ideas that come to mind as you are looking at the pages. Start with the first page and look at each page for 1 or 2 seconds.

Then teacher and students proceed to look at each page in the book.

It is suggested that the instructors begin with a discussion regarding the idea that occurred to them while looking at the pages. Students are encouraged to question the instructors as to how they formulated that idea. The instructor refers back to brief notes and may or may not add to them. A written survey/idea statement is evolved from this discussion.

The instructor then asks students what thoughts they had when looking at the book and guides them in framing their own idea statement. This statement may be written on a 3 x 5 card and placed in the book to be referred to later or revised should the student decide to read the book. We have found that most students have become interested enough to want to read the selection. This procedure can be repeated using four to six page excerpts from textbooks.

About-Point

This technique asks students to specifically state the general topic of a paragraph or chapter and to support their statement with facts or examples. Appropriate subject matter can be selected from almost any kind of reading material. Newspapers and magazines offer many excellent and

inexpensive selections. Textbooks are also useful and may help to provide transference of skills to content areas. Other readers, of course, will also be effective, such as the Sack-Yourman materials from the College Skills Center and the Jamestown Publisher's readers.

The power in this technique is that it aids students in identifying the major points and supporting details in a simple, uncluttered fashion. For example:

> "This paragraph is about the concepts of sin and guilt and the point is that the concepts should be understood in light of our changing social context."

Some of the sentences will be lengthy, depending on the material and the students' initial abilities to determine what they are reading. These sentences should be concise and in the students' own words.

"About-point" can be used with longer selections. Important details can be listed after the basic sentence has been written. An "about-point" statement helps keep material in mind so that additional reading will become more meaningful. The more one works with ideas to frame a clear statement, the more one gains from the material.

Annotations

Once students have become proficient in survey-idea statement and "about-point", they are ready for "REAP". The REAP annotation system (Read, Encode, Annotate, Ponder) is a brief digest of the ideas or information in a piece of writing. Writing annotations is a way of crystalizing what the student has gained from his reading. Since Eanet and Manzo (1976)

have fully explained a model for teaching and discussed the many educational settings in which REAP can be applied, it is highly recommended that one refer to their article before attempting to teach this method.

What follows is a brief description of some of the types of annotations.

The HEURISTIC ANNOTATION is a statement, usually in the author's own words, which has two purposes: to suggest the idea of the selection and to provoke a response. To write it, the annotator needs to clarify in his own mind what the essence of the selection is, and then to select a quotation that hints at that essence in a stimulating manner.

The SUMMARY ANNOTATION condenses the selection into its most concise form. It should be brief, clear and to the point. It includes no more or no less than is necessary to adequately convey the development and relationship of the author's main ideas. In the case of a story, the summary annotation is a synopsis -- the main events of the plot omitting conversation, explanation and description. With a nonfiction selection, the significant ideas are stated in such a way as to show their relationship, omitting examples, elaboration, clarification and other detail.

The THESIS ANNOTATION is an incisive statement of the author's proposition. As the word incisive implies, it cuts directly to the heart of the matter. In the simplest terms, it is the main idea of the selection, or, in the case of a story, its theme. One way to write this annotation is to summarize the summary into one clear and unambiguous statement. Another way is to ask, "What is the author saying? What one idea or point is he trying to put across to the reader?"

The QUESTION ANNOTATION directs attention to the idea that the annotator thinks is most significant. This may or may not be the same as the author's thesis. One value of writing the question annotation is that it requires the reader to reflect on what he has read and to evaluate the ideas presented in the light of his own experiences.

The CRITICAL ANNOTATION is the annotator's response to the author's thesis. In general, there are three responses a reader may have -- agree, disagree, or agree in part and disagree in part. The first sentence in the critical annotation should state the author's thesis. In the next sentence, the annotator should state his position. The following sentences should be devoted to defending the position which the annotator takes.

The story "The Perfect Match" was written by a student. The annotations which follow the story are examples of how other students responded to it.

THE PERFECT MATCH by Stephen Makler

I walked into the office and shook hands with a smiling man named Mr. Bleaucher. He was dressed very well, compared to me. He shuffled a pile of papers.

"I am sure you will be very pleased with her," he said. "She was picked by our computer from among all the single women in the United States. We classify by race, religion. . ." he went on.

I sat there interested. I wished I had taken a shower before I came. It was a very nice office, but the chair was not too comfortable.

"And now. . ." he said. He flung open the door to the next room, as if he were a magician. He needed a cape, though. I was expecting a rabbit, but I got a surprise.

She was pretty. Really, she was pretty.

"Mr. Walker, this is Miss Alice Dunfield of Laughing Lake, Montana. Miss Dunfield, this is Mr. Franklin Walker of New York."

"It's really Frank, I said. "Franklin is something else again." I was a little nervous. She was pretty, you see.

Mr. Bleaucher left, and we were able to talk.

"Hello."

"Hello," she said.

"I'm. . . I'm very pleased with the choice," I said. I was trying to be smooth. Maybe she didn't like being called a choice.

" I mean--I'm glad the way things turned out."

She smiled. She had a nice smile. Good teeth.

"Thank you," she said. "So am I." She was shy.

"I'm thirty-one," I blurted out.

"Yes, I know. It's all on the cards," she said.

It seemed as if the conversation might be over. Everything was on the cards. There wasn't really much to talk about then.

"How about the children?" she said.

"Three. Two boys and a girl."

"That's just what I want," she said. "It's on the card marked 'Future Planning.' That one there."

I suddenly noticed the papers in my hand. On the first page was glued an IBM card with facts about her. I guessed the thing she was holding was the same thing on me. I began looking through the papers, and so did she. The turning pages made a lot of noise.

It said she liked classical music. (This was under "Hobbies and Habits.")

"You like classical music?" I asked her.

"Well. . . better than anything else. I also have all of Frankie Laine's records."

"He was a great old singer," I agreed.

I went on looking through the file, and so did she. She liked books, football, sitting near the front in the movies, sleeping with the windows closed, goldfish, tunafish, salami sandwiches, simple clothes. She liked private schools for the children (our children, really), living in the suburbs, art museums...

She looked up. "It seems we like the same things," she said.

(cont.)

"The exact same things," I said.

I read a report called "Psychology." She was shy, did not like to argue, was a good mother type.

"I'm glad you don't drink or smoke." she said.

"I don't. I don't like to. Sometimes I have a beer, though."

"It doesn't say so down here."

"Well, I guess I forgot to put that down." I hoped she didn't mind.

We finished reading the reports.

"We are very much alike," she said.

Alice and I have been married for nine years now. We have the three kids already, two boys and a girl. We live in the suburbs and listen to a lot of classical and Frankie Laine records. The last time we had an argument is too far back to remember. We agree on almost everything. She's been a good wife, And, if I may say so, I've been a good husband. Our marriage is perfect.

We are getting a divorce next month. I can't stand it.

Heuristic Annotation

"I'm sure you'll be pleased with her. She was picked by our computer from among all the single women in the United States."

Summary Annotation

This story concerns two people who felt that having the same interests would insure compatability. Introduced through a computer mating service, Alice and Frank believed that they would live 'happily ever after' since they were very similar in preferences, values and lifestyle. After 9 years of "bliss", Frank felt that there must be more to life than compatability.

Thesis Annotation

In marriage, perfection may be unendurable.

Question Annotation

Can computer matchmaking really work? In "The Perfect Match" Stephen Makler expresses one viewpoint.

Critical Annotation

A perfect match might make an unsuccessful marriage. Learning to get along together and trust one another in spite of differences is an important part of the 'glue' that holds together a good marriage.

Vocabulary

Manzo and Sherk (1972) observed that there has been little change since the American Revolution, with respect to the teaching of vocabulary. Vocabulary teaching is rooted in the concept that vocabulary is learned, and that a vocabulary is something a student possesses: Operating on the aforementioned concept, teachers give students lists of words to learn — word families, individual words, words in various groupings.

We are currently working on an alternative hypothesis, that it is not the number of words that students know that is significant, rather it is the way they process the words they do not know. Current teaching practices offer students three basic techniques — memorize words, guess using context clues, and consult an authority (friend, teacher, dictionary). We propose that students generate a list of words using similar parts, infer a generalizable common element, check that element against context, and thus extract meaning from the unknown word.

Our research in this area is not yet ready for publication, but one element is — the Latent Image technique.

Latent Image Use in Vocabulary Development

Not all student in health sciences develop a quick affinity for Latin and Greek roots. For those who do not, we used the Latent Image process as a base for medical vocabulary development.

Latent Image refers to a duplicating process whereby a latent image can be made visible by the use of a special marker. A student can be given a Greek or Latin root, four (or more) choices of meaning, and a series of latent image clues. The clues are English words which incorporate the Greek or Latin roots, words in the working vocabularies of most students. We instruct students to answer correctly using the fewest possible clues.

Given practice with this technique, we hypothesized the students would, when encountering an unknown word, generate a mental list of words containing a similar element. From that list, they would infer the common element of meaning which could then be used to derive the meaning of the troublesome word. As students worked through a series of exercises, they came to realize that they already knew the clue words and that they could develop those clues as well as we. Further, that there are, in fact, families of words which have related meanings. Thus, we are able to draw upon the pre-existing knowledge of students and to show them how they can use that knowledge in new ways for problem solution.

This technique was successful far beyond our expectations; students discovered what teachers had been telling them for years. In that discovery lay understanding and mastery.

As a footnote, we must add that we walked around the room as our groups of students worked and put hand-drawn stars beside correct answer.

This simple reinforcement technique works as effectively with advanced graduate students as with the most naive primary-schoolers.

Modification of Distar Technique

No proven technique can be excluded as irrelevant to the instruction of post-secondary students. An example is the use of the Bereiter and Engelmann techniques which were developed for headstart and early-elementary students. We adapted it for upper level and graduate students in the Pharmacy School.

Our purpose was to teach medical vocabulary and to make it enjoyable because we wanted to use as many learning modes as possible (Distar uses seeing, listening, speaking) and because we wanted a maximum number of student responses per minute (Distar uses group responses), we chose Distar, modifying as follows:

Write on chalkboard:

cardi (o) — heart	graph — to write
psycho — mind	ometry - to measure
crani — skull	phobia — aversion to

Then say:

> I'm going to tell you an English word and ask you to think of the medical equivalent. Don't say it until I give the signal. The signal is when I hit the chalkboard with the side of my hand like this. (signal) I'll do that after I say, "What's the word?" Then, when I hit the board, you answer. Ready?
>
> The measurement of the skull. What's the medical word for that? Put it together. What's the word? (signal) CRANIOMETRY. Excellent. Andy, I didn't hear you. By yourself this time. Only Andy. Measurement of the skull. What's the word? (signal) CRANIOMETRY. (and so it goes)

Later, we erase the English translations but continue as if they were present. Finally we erase the chalkboard entirely, but continue in the same fashion.

Students appreciated the rapidity with which we worked, the active student response, and their high rate of retention. They participated enthusiastically and effectively.

Comprehension

Comprehension is an internal process which gives one the power to find and understand various thought relationships that exist in material, such as time relationships, simple listings, comparison or contrasts and cause and effect. Before reading a passage, students need to have a purpose for reading and be encouraged to make full use of previous learning.

The degree to which comprehension is influenced is dependent upon the student's fund of information, which includes his/her environment, education, parental training and other factors. Comprehension is also influenced by knowledge of words and by practice of comprehension tasks.

Comprehension research has isolated a number of subskills which are involved with the process of understanding what has been read. Some comprehension subskills are: 1) curiosity about questions around which college courses are designed; 2) ability to gain information and then organize it into a statable form; and 3) ability to question oneself and others in order to elicit further information.

Our bias here is evident. While it is useful to routinely stress comprehension through conventional means, students learn more quickly if they are helped to become thoughtful, active questioners. When they can ask questions about what they do not know or understand, they can find answers.

The Informal Quiz

We advocate the use of the informal quiz in all lab sessions, discussion sessions, small-group tutorials as well as class sessions with fewer than 50 students. Properly used, it reinforces and/or develops comprehension, retention of information, interest, enthusiasm, attendance, participation and attention. This quiz is not intended to be a method for formally evaluating student work.

The informal quiz was designed to accomplish the following: 1) allow weaker students to participate equally with stronger; 2) give each student an opportunity to demonstrate competence; 3) assure that students cannot fail; 4) generate student trust; 5) develop a high degree of student involvement; 6) demonstrate that continuity of a course of study is important; 7) set the tone for a class session with a comprehensive review of the course from the beginning; and 8) provide a mind-set for a class hour. Those goals may appear to be excessive for what can be feasibly accomplished within a class hour, but they can be accomplished in 10 minutes or less.

The scenario: At the beginning of the class hour, the instructor passes out quarter-sheets of paper. The instructor then asks 5 - 10 questions, half of which are based on the previous class session, requiring one-word answers or short phrase answers, which cover obvious details and/or concepts. The second group of questions are for review, some covering material from the earliest class sessions. These require recall of detail, concepts or principles. The instructor asks: "Who

has an answer to any question?" As students raise their hands, call on the weakest students first and ask them which questions they wish to answer. Repeat the question; praise the correct answer. If someone is inattentive and wishes to answer a question which has just been answered by somecne else, let him do it. An answer isn't "used up" after a single use. If some questions are unanswered, let them go unanswered. If a student asks for an answer to an unanswered question, the teacher answers but does not draw attention to it.

In addition to the values indicated, we have found that students are reminded of the comprehensive nature of the course. The teacher has avoided saying "Remember what we were talking about yesterday?" Use of the informal quiz actively involves students in review. Key concepts are recalled and reinforced. Another advantage is that the teacher has shown students what is important. Further, all of these advantages have been gained with a minimum expenditure of time.

ReQuest Procedure

ReQuest can improve students' reading comprehension by improving their questioning behavior. The teacher encourages the students in a specified manner, to ask questions about textual material and to set their own purpose for reading. The teacher serves as a model for questioning behavior and provides direct feedback to the students concerning their questions.

The scenario: "The purpose of this lesson is to improve your understanding of what you read. We will each read silently the first

sentence. Then we will take turns asking questions about the sentence and what it means. You will ask questions first, then I will ask questions. You may ask me as many questions as you wish. When you are asking me questions, I will close my book. When I ask questions, you close your book."

The student and the teacher each read (silently) the first sentence of the selection. The teacher closes his book and the students ask as many questions as they wish. The teacher answers the questions asked as fully as possible. The teacher requests rephrasing of any question which cannot be answered due to poor syntax and/or incorrect logic.

After the teacher has answered all the questions the student wishes to ask, the student closes the book. The teacher asks as many questions as can profitably add to the student's understanding of the content. The teacher should be actively attempting to serve as a model of good questioning behavior. If questions are limited to factual recall and recognition, comprehension may be shallow. If questions posed are thought-provoking, the development of answers will increase critical thinking and heighten comprehension.

After two or more sentences, the teacher or students can pose questions which require integration and evaluation of prior sentences. Improvement of student questioning behavior can be reflected by informative statements like, "That's a great question. In order to answer it I have to consult an additional reference." Or, "Your questions make me think the way my questions are supposed to make you think."

ReQuest is continued until the student can provide a reasonable response to the question, "What do you think is going to happen in the rest of this selection? Why?" This last question sets a purpose for reading the rest of the selection.

ReQuest works well with one student or a small group of students. College instructors have responded enthusiastically to this procedure as they discovered that students were quite capable of in-depth discussion of such complicated notions as photosynthesis, the philosophy of capitalism, and schizophrenia. It is possible to practice the procedure using paragraphs instead of sentences. Alice Legenza, now at the University of Kansas, developed a number of procedures based on the ReQuest model for improving students' inquiry ability. These procedures are applicable at the post-secondary as well as elementary level.

The Guided Reading Procedure

This procedure enriches comprehension skills by having the teacher allow students to see implicit questions, by reinforcing concentration during reading, by encouraging self correction, and by organizing information with minimal teacher direction. The GRP has consistently provoked visible changes in teacher and student behavior, the most obvious being an increased proportion of student rather than teacher talk. The Guided Reading Procedure has been field tested for several years in both secondary and post-secondary institutions.

The scenario: The instructor gives students a short selection with the directive: "Read to recall all." The length of the selection should not exceed 2,500 words. Each member of the group finish reading and places the selection face down. When all are finished, the teacher

asks the group to recall what they remember in any order. The teacher records the information on the chalkboard, writing as rapidly as possible. Sometimes, students will be slow to recall what they have read. After a few moments they will begin to remember, especially as they make associations with what others recall.

When students have recalled all that they can, they will recognize that some information is missing and note that some of what they have recalled is incorrect. The most effective way to correct themselves and/or add to the information is to re-read. Once the information is corrected, the class attempts to organize what they have remembered in some kind of outline form; at this juncture the teacher may ask some non-specific guiding questions, such as "What seems to be the main idea?" or "What was discussed first?"

Once the outline has evolved, the teacher raises specific questions deemed necessary for full understanding. This step involves transfer of learning as the questions require synthesis of new information with topics previously covered. The last step is to evaluate what students remember by giving them a multiple choice, essay or unaided recall test. Such tests serve as a reward, not as a source for grades.

The Guided Reading Procedure is one of the few comprehension-development strategies that can be applied to virtually all types of content, ranging from one-page editorial comments to poetry and elaborate scientific material.

Statement - PIE

Laia Hanau couches an old concept in a new form, and in so doing clarifies it beautifully. The concept: Professors in lectures (and authors in books) make relatively few STATEMENTS. A statement is a key generalization or main idea. The remainder of the lecture (or book) consists of Proof, further Information, or/and Example -- P I E. The student's problem is to distinguish the STATEMENT from the PIE, to infer the STATEMENT from the PIE, and to recall both STATEMENT and PIE.

The terminology makes a lot of sense to students. Use of the Hanau vocabulary is especially appropriate when reviewing class notes and improving textbook reading.

The Feel Method

The concept of "readiness" applies to students in advanced stages of reading as much as to beginning readers. The better the student's preparation for reading, the higher the rate of comprehension. As often as we may repeat a readiness instruction, its meaning doesn't always register. We have, therefore, prepared a somewhat whimsical method for introducing a reading selection. It is one which we think makes students aware of how much they already know about the subject at hand, how much they can gain from listening to a brief introduction, and how much they can infer from their knowledge of literary form. The subject in this instance is George Orwell's essay, "Shooting an Elephant," and we call our readiness activity the "Feel Method." Here's how it goes, in script form.

Announce: Today, I'm going to show you a way to improve reading comprehension, the feel method.

(Teacher passes out papers.)

Leave the papers face down, but handle them. Feel them. The edges, the top, the bottom. When you have felt them thoroughly, put them down. Try not to look at them.

(Teacher collects the papers)

(Teacher passes out quiz sheets — very informally.)

Now we will have a quiz on the essay you just felt, George Orwell's "Shooting an Elephant." Has anyone read it previously? Okay, but remember — don't give anyone an answer unless asked for one.

Questions on the quiz sheet:

1. What is the name of the author of the essay?

2. What is the name of the essay?

3. What type of writing is it -- that is, short story, poem, essay, article, diary, memoir -- ?

4. What is killed in the essay?

5. By what means is the killing accomplished?

6. Who does the killing? What person?

Guess at these if you don't remember. You may know more than you think.

7. In what countries or continents are elephants found in a natural environment -- I mean outside zoos and circuses?

8. In what country or area are elephants used for work?

9. Why might it become necessary to kill a working elephant?

10. Where might the events described by Orwell have occurred?

11. What was Orwell's relationship to the events -- was he an accidental observer, was he involved, was it something he heard about, or was it something he made up?

12. What densely-populated country was once known as "The brightest jewel in Britain's imperial crown?"

(After students have answered or guessed at answers, it is time to check them. This is an important element of the procedure as we want to elicit all possible ideas from the group. We do it in this way --)

Who has an answer to a question, any question?

(A student raises a hand.)

Which question would you like to answer?

(The student may answer any question. Maybe #5.) After the student identifies the question he or she wishes to answer, the teacher repeats it and the student gives the answer, i.e. "The elephant was shot."

Excellent guess. You felt the essay very well. Did anyone have another answer?

(Leave the exact answer unstated, especially if there is disagreement. This is important because it removes the teacher from the role of the answer-giver).

End of scenario.

Question #12 is included because it gets at the basic theme of the essay, imperialism. In the process of answering the question, the students may be asked, incidentally, what they know of imperialism.

By the end of the exercise, students are aware that they were guessing. They are aware of how much they know or can infer about the subject, and they are prepared for the reading. The mind-set has been established. The reading can occur with, as promised, a higher level

of comprehension than would have existed had the activity not taken place.

It is necessary to discuss the activity with the students at some point. It is important that they understand that they brought much information to their reading of the essay and that the information they brought helped them to comprehend more fully.

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CHAPTER V

AFFECTIVE CONSIDERATIONS

As we mentioned in Chapter II, a learning center must consider the emotional (affective) as well as the academic (cognitive) needs of its clients, for it is not possible to effect positive changes in students' performance without some attention to the way that students feel about their classes and themselves as learners in those classes.

College students who have difficulty in content area classes often tell themselves that good grades are simply a matter of studying harder--buckling down. This may be true, for it is well established that the more often students manipulate sets of facts, the better their chances will be for remembering them. Listening to a concept, reading about it, writing it down, discussing it with someone else and pondering it are all good ways to accomplish content mastery. However, what we fail to teach students is that there are also times when "one-shot" learning occurs.

All of us have had the experience of reading a particular book or listening to a charismatic lecturer that so thoroughly stimulated us that we have <u>never</u> forgotten the concept discussed. We use special words to describe this kind of experience. We say we were "spellbound," "absorbed," "riveted," "gripped," "glued," "enchanted," or "turned on." Instead of being conscious of the time and effort involved, we say "the time just flew."

When we have such an experience, the affective as well as the cognitive part of the mind is actively engaged; we can feel the excitement and the energy present. In fact, it may not be an exaggeration to propose that 50% of the students' power to learn is affective. Granted, persons must be ready cognitively to understand certain facts and concepts; that is basic. But given this, what the students are feeling during the time they are trying to process information is pivotal. If they are ready for the information, value it, are confident of their learning ability, they are operating, in a practical sense, at 100% power. They are actively utilizing both their cognitive and affective abilities in a positive way.

If, however, they find themselves watching the clock, counting the minutes or the number of pages to be read and anticipating what they are going to do after they are finished, we could say that they are utilizing no more than 50% of their power. If they are telling themselves such things as "I don't like this course; I can't stand that teacher!, I don't want to do this assignment," learning may well be impossible. The expression that one gets what one expects is particularly appropriate when considering "self-talk" during periods of learning. This is true not only in times of trying to master material, but it also applies to the producing material on a test.

A case in point: Jeff came to the center about a problem he was having in chemistry. He said that he understood the lecture, made good grades on the class assignment but "froze" during tests. He began getting nervous

a full week prior to his chemistry exams. Although he studied diligently, when it came time to sit down and reproduce the information, he was so anxious that he couldn't remember all the steps and formulas. During the conversation, he reported that his study habits were good, he enjoyed school, and he carried a "B" average in his other classes. Incidently, Jeff also considered himself an exceptional tennis player. When asked if he ever played with anyone who was his equal on the court, he replied that there was one young man who he found difficult to beat. During the conversation he related that his most effective strategy for winning was to "psyche himself up." He explained, "I tell myself all sorts of things--like on my worst day, I'm better than he is, and today I'm going to play so brilliantly that I will embarrass him right off the court."

The specialist then asked what would happen if he played this person with the same "mind set" he had when taking his chemistry exams. Could he beat him? He didn't answer. The moment of realization that followed provided the basis for overcoming test anxiety.

The power to produce one's best effort is present whether one is playing an exceptional game of tennis, impressing a prospective employer, or mastering a chapter in chemistry. The problem is not one of source availability, but use. We tap it automatically when we engage in activities we enjoy, or when we must, as in a crisis situation. But in learning, we often wait for some outside force to act as the catalyst--a charismatic teacher, a well-written book, or a good friend. From time to time, most of us use the excuse that we are not in the mood and must await the urge, as if some outside agent will push the magic button that gets us started. To be sure, this is part of our human nature. But the ability to accept

responsibility for one's own moods, self-talk, and level of interest or performance is also a part of human nature.

If, in the questioning process, it can be established that a major problem appears to be the student's negative attitude, one might share with him the following ideas:

1. Understanding the Concept. Remind the student of the importance that attitude plays in all areas of endeavor. Help him recapture the feeling of enthusiasm that is present when he's learning something he really enjoys, and that he can generate a similar affective state whenever he chooses.

2. Establishing Relaxation. Tell him to begin by using relaxation techniques. If he's familiar with TM or Yoga or any of the various techniques available, encourage him to use whatever he knows. If it becomes necessary to offer a method, here is one that is simple and effective: Suggest that he begin by placing himself in a quiet, comfortable place, hands resting at his side, legs uncrossed, and feet on the floor. If at all possible, lead him through the exercise. Tell him to take a deep breath and while exhaling concentrate on relaxing everything about his head—eyes closed, forehead relaxed, lips apart, neck muscles relaxed. When exhaling the next breath, he should think about his hands—relaxed now and warm. The following area of concentration should be the chest and stomach. Continue, instructing him to relax with each exhale, until he has focused his attention on each major body unit.

A variety of images and exercises can be used to facilitate the experience. Two resources that are particularly helpful are the tapes by either Arnold Lazarus or Emmett Miller. Lazarus focuses attention

upon muscle relaxation, and Miller uses visual images to attain similar results. Such tapes provide a useful means of immediate training for those who would not feel comfortable in undertaking such instruction themselves.

3. Utilizing Affirmation. When the student is thoroughly relaxed and comfortable, he should think about his assignment and design an affirmation statement that he feels would be helpful in getting him ready to learn. An affirmation is a statement of positive nature that helps the learner internalize a useful idea or attitude. It should be based upon a concept that the student feels will be both practical and possible.

What students have found useful varies widely. A statement that might be offered to the student is, "I am thankful for the fact that I can read this assignment, understand it, and remember what I've read." One student, however, responded, "The first time I tried that, the little voice inside my head said, 'Who do you think you are trying to kid?' " This is not an unusual response, especially if the student is having difficulty with the material. Persistence, at this point, is the key, for it is not just a matter of positive thinking. That is only the first step. The student must feel and internalize the affirmation.

As a footnote on affirmation, it may seem strange to suggest to students that they begin with a phrase like "I am thankful." If students were to say to themselves, "I have the ability" to...", they might only <u>think</u> the thought. The whole purpose behind using affirmations is to involve the <u>feeling</u> nature. The insertion of words like thankful,

grateful, or appreciate can be used to elicit a positive emotional response. By definition, they describe something one feels, thus adding an affective dimension to the statement.

It is sometimes difficult to explain to students how they can know when they have reached a desired affective state, but the statement we find useful is as follows: "When the feeling runs through you like a good piece of music, then you know you've got it." Most students seem to be able to relate to that analogy.

When the affirmation step is completed, the student is ready to begin the assignment. If the old feelings of frustration begin to arise, the student is to stop, relax, and use an affirmation statement again. At this point, the student may elect to tailor the next statement to the particular need at the moment.

This, then, is the basic paradigm for assisting students in developing attitudes that facilitate learning. Again, the basic steps consist of understanding the concept, establishing relaxation, utilizing affirmations, and internalizing the affirmation statement.

It would be misleading to say that everyone can use this strategy. Some students resist any type of effort which calls for personal involvement; i.e., they have a low tolerance for risk-taking. Others derive too much pleasure from their negative self-talk to abandon it. However, the students who do practice it report that they learn in less time, make better grades on their tests, and actually enjoy the experience.

The Relaxation Project-UMKC

The Relaxation Project was designed as an extension of our work with students. We found that students became increasingly fatigued from the stress they experienced during the course of an academic day. As an alternative to a noon break in noisy, smoke-filled student unions, we offered students a relaxation program which incorporated exercises from yoga, creative imagery, transcendental meditation, and autogenic training. We were aware that this new component added a somewhat unusual dimension to our services. We were also aware that many people might view this kind of program with skepticism. Therefore, we developed an advisory committee composed of university faculty from the departments of counseling, psychology, and physical education. The professionals were invited because of their special interest in the project. They assisted us in planning the program and designing evaluative instruments. One committee member from psychology provided continued assistance in understanding the emotional and physiological reactions that participants are likely to encounter during these activities. This type of consultant service is essential to the program's success. There are occurrences that can be very disturbing to the individual participant and to the group leader unless the leader knows the range of normal reactions and how to interpret them. The group leader also needs to know what reactions may be signs of physical or psychological problems that are not within the normal range.

While a questionnaire was developed as a gross screening instrument, there may be students who are not suited to this kind of program. Students who are under medications, such as insulin, should be advised against participating in the program. In addition, students who are in therapy for emotional disturbances are high-risk participants. It cannot be over-emphasized that a professional psychologist or psychiatrist must be an active member of the consulting committee.

A brief description of the pilot project follows: Sixteen participants enrolled and met twice weekly for four weeks. The Relaxation Response, by Herbert Benson, M.D., served as a basic guide to relaxation. This text was supplemented with creative imagery and progressive relaxation techniques.

The first half hour was devoted to relaxation training; the last half to yoga breathing and postures. At the end of the hour, each participant evaluated the experience(s) by rating on a seven-point scale (1 low to 7 nigh) the degree to which they felt the hour had been beneficial. Participants also kept records of their home practice sessions. Part of the record keeping was a journal in which the students recorded their thoughts and physical responses during relaxation and meditation. The journals were shared regularly with the program leaders and occasionally with the consultant if atypical reactions were suspected.

The students expressed strong support for the project. The mean rating of all sessions combined was 6.0 on the 7-point scale. Students reported being able to concentrate longer, study more efficiently and effectively, and take tests more confidently. Many thought that their

grades improved as a result of participating in the program.

Screening and evaluation forms are appended following this page.

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REGISTRATION FORM

NAME _____ SEX _____ AGE _____ STUDENT ID NO. _____

ADDRESS _____ CITY _____ STATE _____ ZIP _____

Check item which applies to you:

Faculty ☐ Department _____ Position _____

Personnel ☐ Department _____ Position _____

Student ☐ Year in School _____ Major _____

MEDICAL INFORMATION

Do you, or did you suffer from one or several of the following disorders during the last six months?

Diabetes mellitus.....Yes ___ No ___

Hypoglycemia.....Yes ___ No ___

Glaucoma.....Yes ___ No ___

Hypotension.....Yes ___ No ___

Hypertension.....Yes ___ No ___

Cardiac disorder.....Yes ___ No ___

Myocardial infarction.....Yes ___ No ___

Gastritis.....Yes ___ No ___

Peptic ulcer.....Yes ___ No ___

Ulcerative colitis.....Yes ___ No ___

Cancer.....Yes ___ No ___

Bronchial asthma.....Yes ___ No ___

Hemophilia.....Yes ___ No ___

Thyroid disorder.....Yes ___ No ___

Epilepsy.....Yes ___ No ___

Narcolepsy.....Yes ___ No ___

Alcoholism.....Yes ___ No ___

Drug addiction.....Yes ___ No ___

Amnesia.....Yes ___ No ___

Delusion (false belief).....Yes ___ No ___

Fugue (flight reaction, amnesia afterward)....Yes ___ No ___

Somnambulism (sleepwalking)..Yes ___ No ___

Hysterical "fits" or "attacks" ...Yes ___ No ___

Impression that everything seems dreamlike.....Yes ___ No ___

Loss of feeling of one's own reality.....Yes ___ No ___

Feeling one's own body to be unreal.....Yes ___ No ___

Intense agitation and depression.....Yes ___ NO ___

SELF-EVALUATION QUESTIONNAIRE

Please circle the appropriate scale number to indicate the degree to which each word describes how you are feeling at the moment.

	1	2	3	4
	not at all	somewhat	moderately so	very much so
1.	I feel calm	1	2	3	4
2.	I feel secure	1	2	3	4
3.	I am tense	1	2	3	4
4.	I am regretful	1	2	3	4
5.	I feel at ease	1	2	3	4
6.	I feel upset	1	2	3	4
7.	I am presently worrying over possible misfortunes	1	2	3	4
8.	I feel rested	1	2	3	4
9.	I feel anxious	1	2	3	4
10.	I feel comfortable	1	2	3	4
11.	I feel self-confident	1	2	3	4
12.	I feel nervous	1	2	3	4
13.	I am jittery	1	2	3	4
14.	I feel "high strung"	1	2	3	4
15.	I am relaxed	1	2	3	4
16.	I feel content	1	2	3	4
17.	I am worried	1	2	3	4
18.	I feel over-excited & rattled	1	2	3	4
19.	I feel joyful	1	2	3	4
20.	I feel pleasant	1	2	3	4

RELAXATION PROJECT EVALUATION

SESSION #	DATE	Y	R	OE	COMMENTS: (indicate unusual experiences you may wish to discuss with staff)

Please rate your daily experience by entering the appropriate number in the spaces provided on the above chart.

KEY: Y = YOGA

1 2 3 4 5 6 7
not enjoyable very enjoyable

R = RELAXATION RESPONSE

1 2 3 4 5 6 7
tense very relaxed

OE = OVERALL EXPERIENCE

1 2 3 4 5 6 7
not beneficial very beneficial

PROJECT EVALUATION

DATE _____ SESSION NUMBER _____

*On the scales provided, please rate your experience today:

YOGA

1 2 3 4 5 6 7
not enjoyable very enjoyable

RELAXATION

1 2 3 4 5 6 7
tense very relaxed

OVERALL EXPERIENCE

1 2 3 4 5 6 7
not beneficial very beneficial

Please indicate any unusual experiences during the hour which you wish to discuss with the staff:

_____

_____

_____

_____

_____

_____

CHAPTER VI

EVALUATION

Evaluation begins with data collection. And data collection ends with evaluation. Data collection and evaluation are the two primary parts of a single continuous process that begin with the first day of the learning center operation and end only when there is no longer a learning center to evaluate. It is difficult to over-stress the value of the data/evaluation process.

Two types of evaluation must be considered in a learning center operation: 1) the evaluation of the student (needs, progress, and performance), and 2) the evaluation of the program and its components. The first is necessary for obvious reasons, since this is the only way one can measure the true effectiveness of any student academic program. It answers the questions: On what level was the student when he entered the program? What did he do while participating in the program? and, on what level was the student when he completed the program? The second type of evaluation, that of the program, is necessary because it is the only way that the effectiveness of the program can be improved through the critical examination of past performance. There is, however, another critical reason: the program must prove its value to the institution, and a full evaluation is the best way to demonstrate this impact.

Evaluation, of course, may be subjective or objective. While we do not wish to discourage or denigrate the real value of subjective, qualitative evaluation, it is primarily through objective, quantitative

evaluation that the value to and impact on an institution can be demonstrated. This latter, then, is our primary focus.

Without data, hard quantitative data, there cannot be an objective evaluation. It is therefore necessary, in the planning stages of a program, to identify essential pieces of information (data) that will be needed to make a complete and useful eva'uation. This is a necessary part of the planning, since data collection must begin on the first day of operation. It is much more difficult to collect data on past performance than it is to collect it as it occurs. For this reason, it is recommended that procedures for the collection of identified data be formulated and adhered to from the outset of the program. Also, it is sometimes helpful to collect more pieces of information than is projected as necessary since we cannot often anticipate what will be significant. Ultimately, there is no such thing as too much data.

Evaluation of individual students is, of course, part of the primary purpose of a learning center. Without this there would be no way of measuring the effectiveness of its academic assistance function. The data needed for individual evaluations may be organized into three basic categories: 1) entrance data; 2) progress data; 3) follow-up data. Specific pieces of information within these categories should include, but may not be limited to, the following:

1. Entrance Data
   (a) background information (e.g., age, sex, culture, grade level)
   (b) diagnostic pre-test scores
   (c) diagnosis of need
   (d) base level grades (if content assistance is requested)

2. Progress Data
   (a) number of hours spent in individual or group sessions
   (b) progress charts or graphs for skill development
   (c) final evaluation/post-test scores
   (d) student's evaluation of self, sessions, and programs
   (e) instructor or tutor evaluation of student
   (f) student grade in course of referral
   (g) student GPA at end of term
   (h) student cumulative GPA at end of term

3. Follow-up Data
   (a) student GPA at end of next four subsequent terms
   (b) student follow-up evaluation of self and program (six months to one year after completion of program)

The use of this data will be determined by the needs of the particular program and institution. Two items, however, warrant further comment. Background information (Item 1 a.) serves two purposes: 1) as an important aid in the identification of groups needs, and 2) as significant input for institutional self-evaluation and evaluation of the admissions program. Also, in the student's evaluation of the program (Item 2 d.), it is important to solicit and obtain subjective comments. These often provide valuable insights, both positive and negative, that may lead to significant changes or refinements in the program. They may also be used to accent and enliven otherwise "dry" statistical evaluation reports.

From the institution's point of view, program evaluations are an absolute necessity in the determination of its fund allocation. Any program will need to document, as clearly and fully as possible, its value to the students and faculty. The data listed above will aid, of course, in this task. Some other data is needed, however, to fully evaluate a learning center's impact on its institution. Some particular pieces of information are:

1. Faculty evaluations of the class performance of students referred.
2. Number of faculty referrals.
3. Number of students enrolled in learning center programs.
4. Number of students completing programs.
5. Total number of hours spent in individual and group sessions.
6. Attrition/Retention studies
   (a) Number of students in program who were suspended for academic reasons (percent academic retention)
   (b) Number of students in program who left school for any other reason (combined with 6 a. will give percent total retention).

The last two pieces of data, when compared to institutional retention rates, will provide a significant evaluation, since the majority of students' participation in learning center programs are those for whom the institution generally expects a lower retention rate than that of the institution as a whole.

Appendix VI-A contains sample data and evaluation forms. Calvin Evans, in cooperation with Dr. Arlene Payne, Department of Educational Psychology, University of Missouri at Kansas City, developed the forms for the Learning Center at Rockhurst College. Deanna Martin and staff developed the forms for the Student Learning Center at UMKC. Both sets of evaluations seek essentially the same information in somewhat different ways. They were developed to meet the particular design of those learning centers and are included here as references.

STUDENT ENTRANCE DATA FORM
Learning Center
Rockhurst College

Soc. Sec. No. _ _ _ _ _ _ _ _ _
Name _____ Date _____
Local Address _____ Phone _____
Home Address _____ Phone _____

Sex ___ Male (1) Female (2)

Culture
___ Anglo Saxon (1) ___ Oriental (5)
___ Black (2) ___ Puerto Rican (6)
___ Mexican (3) ___ Other (7): _____
___ Native American Indian (4)

Age ___ ___

Financial Aid
___ Financial help from family (1)
___ Employment, self-support (2)
___ Scholarship (3)
___ Loan (4)
___ Other (5): _____

Veteran ___ Yes ___ No

Major
___ Humanities (1)
___ Social Science (2)
___ Natural Science (3)
___ Applied Science (4)
___ Business Ad. (5)
___ Other (6): _____

Entrance Status
___ 1st Sem. Freshman (1)
___ 2nd Sem. Freshman (2)
___ 1st Sem. Sophomore (3)
___ 2nd Sem. Sophomore (4)
___ Junior (5)
___ Senior (6)
___ Other (7): _____

Referral to
___ Learning Center for _____
___ Tutoring for _____

Referred by
___ Instructor (1)
___ Self (2)
___ Other student (3)
___ Faculty advisor (4)
___ Other (5): _____

Base level in tutor area: NA1: _____ NA2: _____ NA3: _____ NA4: _____

Entrance GPA: ___ ___ ___ ___ (Cumulative GPA)

Needs assessment:

___ Study skills
___ Grammar (Editing skills)
___ Writing skills
___ Reading
___ Vocabulary
___ Oral Comm.
___ Math skills
___ Tutoring
___ Technical skill: _____
___ Technical skill: _____
___ Basic course unit: _____
___ Grad. Adm.Test Prep. _____

Assignment:

___ Credit - 1 hr. (1)
___ Credit - 2 hr. (2)
___ Credit - 3 hr. (3)
___ Non-credit (4)

ACT Scores:

___ ___ English
___ ___ Math
___ ___ Natural Sci.
___ ___ Social Sci.
___ ___ Composite

Diagnostic Test Scores: %'tiles

Reading; ND:

V ___ ___
C ___ ___
T ___ ___
R ___ ___

Study Skills; BH:

DA ___ ___
WM ___ ___
SH ___ ___
TA ___ ___
EA ___ ___
SA ___ ___
SO ___ ___

English; MH:

LM ___ ___
SP ___ ___
PP ___ ___
T ___ ___

Math; AMS:

WN ___ ___
F ___ ___
D ___ ___
PR ___ ___

Reading; MH:

RR ___ ___
SS ___ ___
PC ___ ___
T ___ ___

STUDENT PROGRESS DATA FORM
Learning Center
Rockhurst College

Name _____
Soc. Sec. No. _ _ _ _ _ _ _ _ _

Need area 1:
Total number of hours in sessions: _ _
Total number of sessions attended: _ _
Number of sessions missed: _ _

Need area 2:
Total number of hours in sessions: _ _
Total number of sessions attended: _ _
Number of sessions missed: _ _

Need area 3:
Total number of hours in sessions: _ _
Total number of sessions attended: _ _
Number of sessions missed: _ _

Need area 4:
Total number of hours in sessions: _ _
Total number of sessions attended: _ _
Number of sessions missed. _ _

Current Year Record:

FALL		SPRING	
Course	Grade	Course	Grade
Hrs. Passed:	Sem. Avg:	Hrs. Passed:	Sem. Avg:
Cum. GPA:		Cum. GPA:	
Standing:		Standing:	

Grade in subject area of referral: (Specify course)

NA1: _____	A	B	C	D	F	AU	I	W
NA2: _____	A	B	C	D	F	AU	I	W
NA3: _____	A	B	C	D	F	AU	I	W
NA4: _____	A	B	C	D	F	AU	I	W

Student's final ratings of program:

	NA1	NA2	NA3	NA4
Self	_ _	_ _	_ _	_ _
Sessions	_ _	_ _	_ _	_ _
Learning Center	_ _	_ _	_ _	_ _

Instructor or Tutor's final rating of student:

	NA1	NA2	NA3	NA4
Attitude	__ __	__ __	__ __	__ __
Progress	__ __	__ __	__ __	__ __
Potential	__ __	__ __	__ __	__ __

Post-test scores:

Reading; ND:

V	__ __
C	__ __
T	__ __
R	__ __

Study Skills; BH:

DA	__ __	EA	__ __
WM	__ __	SA	__ __
SH	__ __	SO	__ __
TA	__ __		

English; MH:

LM	__ __
SP	__ __
PP	__ __
T	__ __

Math; AMS:

WN	__ __
F	__ __
D	__ __
PR	__ __

Reading; MH:

RR	__ __
SS	__ __
TC	__ __
T	__ __

Follow-up data:

Student ratings:

Time since completion:

___ less than 6 months (1)
___ 6 mos. to 1 year (2)
___ more than 1 year (3)

Ratings:

Self	
Learning Center	__ __

Subsequent GPA:

Year	Sem.	Term GPA
Soph.	1	
Soph.	2	__ __ __ __
Junior	1	__ __ __ __
Junior	2	__ __ __ __
Senior	1	__ __ __ __
Senior	2	__ __ __ __
		__ __ __ __

STUDENT RATING FORM
Learning Center
Rockhurst College

NAME _____ DATE _____

TUTOR _____ NO. SESSIONS ATTENDED _____

SOC. SEC. NO. _ _ _ _ _ _ _ _ _ LAST GRADE RECEIVED _____

KEY: SA - strongly agree, A - agree, N/O - no opinion, D - disagree, SD - strongly disagre

Since coming to the Learning Center:

	SA	A	N/O	D	SD
1. My performance in class has improved.					
2. I feel more confident in my ability to learn.					
3. I am able to take better notes in class.					
4. I feel that my grades have improved.					
5. My study habits have improved.					

Learning or tutoring sessions:

1. I have had the opportunity to ask all the questions I wished.					
2. The sessions have helped me prepare for specific classes.					
3. My time is well spent in the sessions.					
4. Concrete information is presented in the sessions.					
5. My instructor or tutor is always prompt.					
6. My instructor or tutor is always well-prepared.					
7. I would prefer to keep the instructor or tutor I have been working with.					
8. The schedule for my sessions fits in well with my other activities.					

Learning Center:

1. The staff of the Learning Center has been very helpful.					
2. The Learning Center is an important facility for the students.					
3. The Learning Center provides helpful materials.					
4. I would recommend the Learning Center to friends if they needed assistance in school work.					

Please add any other comments you have about your Learning Center experience: _____

RATING OF STUDENT BY TUTOR OR INSTRUCTOR
Learning Center
Rockhurst College

NAME OF STUDENT _____ SOC. SEC. NO. _ _ _ _ _ _ _ _ _

NAME OF RATER _____ DATE _____

KEY: SA - strongly agree, A - agree, N/O - no opinion, D - disagree, SD - strongly disagree

	SA	A	N/O	D	SD
Attitude:					
1. Is genuinely concerned with improving class performance.					
2. Spends time preparing for sessions.					
3. Asks questions when uncertain of the material.					
4. Is generally prompt for sessions.					
5. Shows a positive attitude toward the opportunity/ assistance provided by the Learning Center.					
6. Appears to be more concerned with actual learning than simply obtaining a particular grade.					
Progress to date:					
7. Comes well-prepared for sessions.					
8. Shows general progress in achievement during the sessions.					
9. Shows definite improvement in attaining the specific objectives of designated need.					
10. Asks good, thoughtful questions.					
11. Shows through comments and questions the ability to focus on important, relevant material.					
Potential:					
12. Gives evidence of having some fairly definite goals in mind.					
13. Shows positive attitude toward own ability to achieve those goals.					
14. Has potential learning ability to achieve own goals.					

No. of Sessions Attended ( ) LAST GRADE STUDENT RECEIVED ( )

Additional comments: _____

FACULTY QUESTIONNAIRE
Learning Center
Rockhurst College

NAME _____ DATE _____

DEPT. _____

LEVEL OF COURSES: ____ Lower division
____ Upper division

Have you referred individual students to the Learning Center? ___ Yes ___ No
If yes: Approximately how many? _____
For which of the following services?
____ Tutoring
____ Development of basic skills
____ Supplementary course materials
____ Graduate admissions preparation

Have you recommended the Learning Center facilities to your classes as a whole or in general to those having difficulty? (not individual referrals) ___ Yes ___ No

(Omit the next item if you have not made any referrals or recommended use of the Learning Center).

Please give us your impression of the amount of improvement shown by students who have used the Learning Center facilities. You may check more than one column if some students have shown more improvement than others. (Omit categories if not relevant).

CATEGORY	MUCH IMPROVEMENT	SOME IMPROVEMENT	NO NOTICEABLE IMPROVEMENT
Reading skills	____	____	____
Math skills	____	____	____
Study skills	____	____	____
Composition skills	____	____	____
Course content - comprehension	____	____	____
Completion of course assignments	____	____	____

Please add any comments that you may have regarding the operation of the Learning Center during the past year.

Please add any comments that will help us evaluate and improve the Learning Center.

Return form by _____, to: Learning Center
Sedgwick, Room 119

FOLLOW-UP RATING BY STUDENT
Learning Center
Rockhurst College

NAME _____ DATE _____

SOC. SEC. NO. _ _ _ _ _ _ _ _ _

How long has it been since you completed your work with the Learning Center?

____less than 6 months
____6 months to 1 year
____more than 1 year

KEY: SA - strongly agree, A - agree, N/O - no opinion, D - disagree, SD - strongly disagree

My experience with the Learning Center:

	SA	A	N/O	D	SD
1. Has made an improvement in my class work.					
2. Has had a lasting effect on my study habits.					
3. Has improved my grades.					
4. Has helped me to stay in school.					
5. Has made learning more enjoyable.					

I believe:

1. The Learning Center is an important facility for the students.					
2. The Learning Center staff was very helpful.					
3. The Learning Center staff was sensitive to my needs.					

Please add any other comments you have about your Learning Center experience: _____

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UMKC STUDENT LEARNING CENTER SURVEY (NO NAME PLEASE)

PART I: Please complete the following identifying information:

1. Age _____ 2. Sex: Male _____ Female _____

3. Ethnic Origin: Black _____ White _____ Oriental _____ Spanish-American _____ Indian _____ Other _____

4. Marital Status: Single _____ Married _____ Other _____

5. Class: Freshman _____ Sophomore _____ Junior _____ Senior _____ Graduate _____ Professional _____

6. Number of times you have used the Student Learning Center: 1-5 _____ 6-10 _____ 10 or more _____

7. Source of referral: Self _____ Friend _____ Academic Advisor _____ Faculty or Staff member _____ Other ___

8. While at the Student Learning Center, did you receive help in all areas in which you were having difficulty?
Yes _____ No _____

9. What type of help did you receive: Individual tutor _____ Group tutor _____ Mini-course or workshop _____
Other _____

10. Were you satisfied with the service you received at the SLC: Yes ___ No ___ No opinion ___ Other ___

11. Would you recommend the Student Learning Center to your friends? Yes _____ No _____

PART II: Rate the statement below by <u>circling</u> the appropriate number:

	LOW RATING	AVG. RATING	HIGH RATING	NO OPINION
1. Promptness of attention	1	2	3	4
2. Courteousness and/or attitude of staff	1	2	3	4
3. Individualized attention	1	2	3	4
4. Rapport and communication	1	2	3	4
5. Privacy and confidentiality	1	2	3	4
6. Campus location of Student Learning Center	1	2	3	4
7. Comfortable facilities	1	2	3	4
8. Clarity of verbal and/or printed instructions	1	2	3	4
9. Quality of help you received	1	2	3	4
10. I would rate the attention given my personal concerns as	1	2	3	4

MAKE ANY FURTHER COMMENTS YOU FEEL ARE APPROPRIATE ON THE BACK OF THIS SHEET.

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STUDENT INFORMATION FORM

NAME _____ STUDENT NUMBER _____

ADDRESS _____
street & number city state zip

SCHOOL _____ YEAR _____ AGE _____

PHONE _____ STATUS _____
area code number

PRESENTLY ENROLLED AT UMKC? yes ( ) no ( )

CURRENT GRADE POINT AVERAGE (if known) _____

ARE YOU EMPLOYED? yes ( ) no ( ) IF SO, HOW MANY HOURS PER WEEK? ____

IF REFERRED BY A FACULTY MEMBER, MAY WE CONSULT THIS PERSON IN YOUR BEHALF?

( ) yes ( ) prefer not

COURSES ENROLLED IN THIS SEMESTER:

number	course name	instructor	need help

TYPE OF ASSISTANCE PREFERRED:

Tutoring -- individual ( ) group ( )
Mini-courses ( )
Test & Evaluation ( )
No preference ( )

INTERESTED IN THE FOLLOWING MINI-COURSES:

study skills ( )
vocabulary ( )
test taking ( )
reading comp. ( )
reading speed ( )
relaxation ( )
note taking ( )

FOR OFFICE USE

1.
2.
3.
4.
5.

STUDENT LEARNING CENTER QUESTIONNAIRE

Name _____ Sex ___M ___F Field of Study _____

Student Number _____ Year in School _____ Date _____

Address: _____
(street) (city) (state) (zip code)

Phone _____ Age _____ Marital Status _____

How did you hear about the Student Learning Center? _____

_____

** AREAS OF DIFFICULTY **

___ Study Skills
___ Vocabulary
___ Test Taking
___ Reading Comprehension
___ Note Taking
___ Math (specify: _____)
___ Social Science
___ Science (specify: _____)
___ English--Composition
___ English--Grammar
___ English--Literature
___ Foreign Language
___ Other (explain) _____

_____

What type of tutoring would you prefer?

___ Tutoring --- ( ) Individual ( ) Group
___ Mini-Courses
___ Individual Conference
___ No particular preference

Are you presently enrolled at UMKC? ___ Yes ___ No

Hours Currently Enrolled _____

Current Grade Point Average _____

If presently employed, how many hours? _____

High School From Which You Graduated _____

_____ City

_____ Grade Pt. Avg.

Colleges and/or Universities and/or Educational Institutions you have attended other than UMKC:

	Name	Location	Dates	GPA
1.				
2.				
3.				
4.				

INTERVIEW AND PROBLEM RECORD

CLIENT NAME _____ DATE _____

INTERVIEWED BY _____

PRESENTING CONCERN (use student's own words):

PROBLEM LIST:

ACTION PLAN (relate to problem number):

TEST RESULTS

OTHER COMMENTS:

CHAPTER VII

ON PREPARING PROPOSALS

On looking back through the preceding pages, we have realized that we have often alluded to or mentioned directly such things as outside funding agencies, grants, and proposals. It seems only fair, therefore, that we make some explicit comments about them, although the relationship between grant proposals and our subject is only an indirect one.

Finding a funding agency and an appropriate grant to provide for a Learning Center project may be a difficult task. However, there are several private foundations and trusts which will provide funds for such a program, and there are a variety of federal grants available through the Department of Post-Secondary Education of HEW. The college or university development office is probably the best place to start the search for outside funds. They will also have the resources for gaining grant proposal information, such as criteria for programs and guidelines for proposal preparation and submission.

Each granting agency will establish the criteria for program funding and guidelines for program narrative development (proposal preparation). Therefore, each grant proposal is likely to be quite different. Although each will be somewhat unique, they will have some common format elements. These are as follows:

1. Background
2. Rationale
3. Objectives of the program
4. Operational plan

5. Implementation schedule
6. Evaluation plan
7. Budget

In one way or another, each of these elements will appear in the required format for each proposal. Specific contents and instructions for proposal writing are not our purpose here. For more detailed information, the reader is referred to the references listed at the end of this chapter. However, some additional comments on the general situation of proposal preparation and planning seem warranted.

Prior planning is one of the most important elements in proposal preparation. If at all possible, it is a good idea to pilot the project before preparing a proposal, in order to demonstrate to the funding agency the value of the project, that it is effective in meeting the needs of the institution and that it is economically feasible. If the pilot project is not possible, it is necessary to research carefully and evaluate past projects of a similar nature at other institutions. These and the demonstrated needs of one's own institution will provide the basis for the rationale of the project.

Three additional suggestions regarding the planning phase seem significant. Consideration of the time frame for planning and preparation is important. One must allow adequate time for a pilot project, for coordinating details of the projected program, for writing the proposal, and, finally, for rewriting and preparation of the final draft. Each of these steps is necessary, and to short circuit any one of them may make a difference in the final product. It should be noted that the due date for

proposal submission is usually an absolute cut-off date. Proposals received after that date will not be considered. Sufficient time, therefore, must be allowed for final clearing and institutional approval as well as mail time. Also in the planning stage, it is essential to gain the support of all other areas of the institution (faculty, administrative departments, student services, etc.). Work out, in detail, all cooperative arrangements beforehand. This will allow for a much more effective operation after the grant is awarded and the project is begun. Finally, if the proposal is being written to fund multiple projects, it is a good idea to have a project coordinator appointed in the early planning stages.

In the actual writing of the proposal, it is absolutely necessary to delineate, clearly and without ambiguity, the lines of administrative and fiscal accountability. This is an item that frequently is not given attention. If accountability is set forth at the beginning, it will eliminate many problems in the actual operation phase of the project. In the preparation, one might also consider these additional suggestions. It is often easier to obtain a large grant than a small one. Try to set the project at an ideal level, with funding to match, rather than at a lower level which you think might be funded because it has a lower price tag. Also, design the project for multiple year funding, (five years if possible), to insure full and fair evaluation of the project. In addition, the proposal should contain a strategy for fund replacement by the institution so the project can continue after the grant funding has expired. This should be

established on an incremental basis over the entire period of the grant. Thus, while the grant will provide most of the funding in the first years of the projects, the institution will carry the major financial responsibility during the final year.

Finally, once the proposal is written or even before the first writing is complete, it is very beneficial to work with someone, a paid consultant perhaps, who has successfully written proposals previously. This will help to account for proposal details which may otherwise be overlooked. He will also be able to aid the writing process with advice on proper terminology and analysis of the audience (funding agency) to which the proposal is addressed.

There are many more things which might be said of proposal writing. These are a few of the things that we feel are important. A proper plan makes a good proposal, and a good proposal goes a long way toward making an effective program.

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AFTERWORD

As stated in the introduction, this monograph was designed as a working manual for persons responsible for a post-secondary learning center. Additionally, we recommend its use as a training manual for learning center personnel and as a resource for college and university faculty and administrators. Currently, the most pressing need is for learning center staff to share their research, concerns and ideas. We have shared ours with you and we invite your response.

> "Man is not a farmer, or a professor, or an engineer, but he is all. Man is priest, and scholar, and statesman, and producer, and soldier."
>
> Ralph Waldo Emerson - The American Scholar

We add here - man is also a learner.

ABOUT THE AUTHORS

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